

The New York
Academy of Medicine



By Exchange



Digitized by the Internet Archive
in 2016

The Journal of the Medical Association of Georgia



Published Monthly under Direction of the Council

Editorial and Business Office—300, 302 and 304 Harison Building.

Subscription Price, \$1.00

Entered as second-class matter, August 4, 1911, at the Post Office at Augusta, Ga., under the Act of March 3, 1879.

Vol. II

AUGUSTA, GA., MAY, 1912 - 13

No. 1

CONTENTS AND DIGEST.

ORIGINAL ARTICLES

President's Address. By W. L. Fitts, M.D.	3
Powers of the State Board of Health. By Samuel C. Benedict, M.D.	4
Examination of County School Children. By A. G. Fort, M.D.	7
The Medical Milk Commission and Its Relation to Public Health. By Clarence A. Rhodes, M.D., Atlanta	7
Possibilities of Laboratory and Bacteriological Work in Medium and Small Sized Towns. By W. W. Brown, M.D., Athens.	11
Some Unusual Cases of Nystagmus. By A. W. Stirling, M.D., C.M., Atlanta.	14
The Operative Treatment of Recent Fractures. By Frank K. Boland, M.D., Atlanta.	16

MEETING OF MEDICAL ASSOCIATION OF GEORGIA

Address of Welcome on Behalf of City.	19
Address of Welcome on Behalf of Local Profession.	20
Response by Dr. W. F. Westmoreland, Atlanta.	"
Address by Dr. Hugh H. Young, Baltimore.	"
Election of Officers.	2
Address of Incoming President, Dr. W. W. Pilcher, Warrenton	23
Secretary-Treasurer's Report	24
Minutes of Council	27
Minutes of House Delegates.	27-28
Program	28

EDITORIALS

Collaborators	30
A Hospital for Nervous Diseases.	30
American Medical Association.	30
Need for Care in Preparing Scientific Papers.	31
To County Treasurers.	31

OFFICERS

President.....W. W. PILCHER, M.D., Warrenton
 First Vice-Pres.....J. W. PALMER, M.D., Ailey
 Second Vice-Pres.....T. H. HALL, M.D., Macon
 Sec.-Treas.....W. C. LYLE, M.D., Augusta

COUNCILORS

First Dist.—J. Lawton Hiers, M.D.....Savannah
 Second Dist.—Gordon Chason, M.D.....Bainbridge
 Third Dist.—V. O. Harvard, M.D.....Arabi
 Fourth Dist.—C. L. Williams, M.D.....Columbus
 Fifth Dist.—J. N. Ellis, M.D.....Atlanta
 Sixth Dist.—J. A. Combs, M.D.....Locust Grove
 Seventh Dist.—W. P. Harbin, M.D.....Rome
 Eighth Dist.—I. H. Goss, M.D.....Athens
 Ninth Dist.—W. B. Hardman, M.D.....Commerce
 Tenth Dist.—W. J. Cranston, M.D.....Milledgeville
 Eleventh Dist.—A. G. Little, M.D.....Valdosta
 Twelfth Dist.—E. T. Coleman, M.D.....Graymont

VICE-COUNCILORS

First Dist.—A. J. Mooney M.D.....Statesboro
 Second Dist.—C. K. Sharpe, M.D.....Arlington
 Third Dist.—
 Fourth Dist.—T. S. Bailey, M.D.....Newnan
 Fifth Dist.—F. K. Boland, M.D.....Atlanta
 Sixth Dist.—R. H. Stovall, M.D.....Macon
 Seventh Dist.—J. H. Hammond, M.D.....LaFayette
 Eighth Dist.—E. G. Adams, M.D.....Greensboro
 Ninth Dist.—J. S. Tankersley, M.D.....Ellijay
 Tenth Dist.—G. L. Carpenter, M.D.....Wrens
 Eleventh Dist.—J. G. Tuten, M.D.....Jesup
 Twelfth Dist.—M. L. Currie, M.D.....Vidalia

STANDING COMMITTEES**Scientific Work**

E. E. Murphey, M.D., Chairman.....Augusta
 V. H. Bassett, M.D.....Savannah
 W. C. Lyle, M.D., ex-officio.....Augusta

Medical Defense

M. A. Clark, M.D., Chairman.....Macon
 J. N. Ellis, M.D.....Atlanta
 E. T. Coleman, M.D.....Graymont
 J. G. Dean, M.D.....Dawson
 E. G. Jones, M.D.....Atlanta

Organization

T. J. McArthur, M.D., Chairman.....Cordele
 G. R. White, M.D.....Savannah
 W. B. Hardman, M.D.....Commerce

Public Policy and Legislation

J. R. Littleton, M.D., Chairman.....Augusta
 W. L. Champion, M.D.....Atlanta
 C. C. Harrold, M.D.....Macon
 President and Secretary, ex-officio

Necrology

V. D. Lockhart, M.D., Chairman.....Maysville
 W. B. Emery, M.D.....Atlanta
 S. S. Smith, M.D.....Athens
 M. F. Carson, M.D.....Griffin
 J. M. Hull, M.D.....Augusta

Arrangements

(Committee to be selected by the Chatham
 County Society)

Delegates to American Medical Association

W. H. Doughty, M.D.....Augusta
 E. G. Ballenger, M.D. (alternate).....Atlanta
 T. J. Charlton, M.D.....Savannah
 T. R. Wright, M.D. (alternate).....Augusta

COLLABORATORS**History of Medicine**

J. B. Baird, Sr., M.D.....Atlanta
 L. G. Hardman, M.D.....Commerce
 T. R. Wright, M.D.....Augusta

Medicine

W. W. Jarrell, M.D.....Thomasville
 Ralston Lattimore, M.D.....Savannah
 Thos. D. Coleman, M.D.....Augusta

Tuberculosis

C. H. Richardson, M.D.....Montezuma
 J. H. Hammond, M.D.....LaFayette
 T. E. Oertel, M.D.....Augusta

Pellagra

G. M. Niles, M.D.....Atlanta
 E. M. Green, M.D.....Milledgeville
 N. M. Moore, M.D.....Augusta

Nervous and Mental Diseases

L. M. Gaines, M.D.....Atlanta
 E. T. Gibbes, M.D.....Gainesville
 W. R. Houston, M.D.....Augusta

Pediatrics

W. Z. Holliday, M.D.....Atlanta
 M. A. Clark, M.D.....Macon
 W. A. Mulherin, M.D.....Augusta

Public Health

E. C. Benedict, M.D.....Athens
 H. F. Harris, M.D.....Atlanta
 E. E. Murphey, M.D.....Augusta

Surgery

W. F. Westmoreland, M.D.....Atlanta
 J. R. B. Branch, M.D.....Macon
 W. H. Doughty, Jr., M.D.....Augusta

Orthopedics

H. J. Williams, M.D.....Macon
 Michael Hoke, M.D.....Atlanta
 H. M. Michel, M.D.....Augusta

Genito-Urinary and Syphilis

J. L. Farmer, M.D.....Savannah
 W. L. Champion, M.D.....Atlanta
 H. W. Shaw, M.D.....Augusta

Obstetrics

H. McHatton, M.D.....Macon
 R. L. Miller, M.D.....Waynesboro
 A. J. Kilpatrick, M.D.....Augusta

Gynecology

E. G. Jones, M.D.....Atlanta
 R. P. Glenn, M.D.....Columbus
 W. W. Battey, Jr., M.D.....Augusta

Eye, Ear, Nose and Throat

F. P. Calhoun, M.D.....Atlanta
 H. H. Martin, M.D.....Savannah
 W. C. Lyle, M.D.....Augusta

Roentgenology

E. R. Corson, M.D.....Savannah
 J. S. Derr, M.D.....Atlanta
 C. W. Crane, M.D.....Augusta

Anaesthesias

T. J. Collier, M.D.....Atlanta
 Chas. Usher, M.D.....Savannah
 M. S. Levy, M.D.....Augusta

Laboratories

K. R. Collins, M.D.....Atlanta
 V. H. Bassett, M.D.....Savannah
 Everard Wilcox, M.D.....Augusta

DISTRICT SOCIETIES

DISTRICT	PRESIDENT	SECRETARY
First	E. T. Coleman..... Graymont	Chas. Usher..... Savannah
Second	Hugo Robinson..... Albany	F. M. Martin..... Shellman
Third	C. A. Greer..... Oglethorpe	M. R. Smith..... Cordele
Fourth	H. J. Goodwin..... Roopville	Homer Boatright..... Carrollton
Fifth	W. D. Travis..... Covington	W. S. Ansley..... Decatur
Sixth	W. J. Little..... Macon	I. H. Adams..... Macon
Seventh	A. B. Greene..... Cartersville	T. Lowry..... Eubarlee
Eighth	T. J. Willis..... Washington	D. H. DuPree..... Athens
Ninth	V. D. Lockhart..... Maysville	A. D. White..... Gainesville
Tenth	J. R. Beall..... Blythe	G. A. Traylor..... Augusta
Eleventh	H. C. Wheelchel..... Douglas	T. J. Carswell..... Waycross
Twelfth	(New District, not yet organized.)	

COUNTY SOCIETIES

COUNTY	PRESIDENT	SECRETARY
Baldwin	J. W. Mobley..... Milledgeville	W. F. Tanner..... Milledgeville
Banks	V. D. Lockhart..... Maysville	J. D. Rice..... Homer
Bartow	A. T. Calboun..... Cartersville	H. E. Felton..... Cartersville
Ben Hill	E. J. Dorminy..... Fitzgerald	L. S. Osborne..... Fitzgerald
Bibb	F. M. Cunningham..... Macon	W. D. Hereford..... Macon
Blue Ridge	J. S. Tankersley..... Ellijay	C. B. Crawford..... Blue Ridge
Brooks	S. S. Galuden..... Quitman	J. S. King..... Quitman
Bulloch	D. E. McEachern..... Statesboro	F. F. Floyd..... Statesboro
Burke	C. H. Cox..... Waynesboro	J. M. Byne..... Waynesboro
Butts	B. F. Aiken..... Jenkins	W. H. Steele..... Jackson
Carroll	M. M. Hallum..... Carrollton	R. E. Foster..... Carrollton
Chatham	V. H. Bassett..... Savannah	A. J. Waring..... Savannah
Clarke	A. C. Holliday..... Athens	M. F. Matthews..... Athens
Cobb	W. M. Kemp..... Marietta	W. H. Perkinson..... Marietta
Coffee	C. W. Roberts..... Douglas	Quitman Holton..... Douglas
Colquitt	J. H. Green..... Hartsfield	J. E. Lanier..... Moultrie
Coweta	T. B. Davis..... Newnan	T. S. Bailey..... Newnan
Crisp	A. J. Wheelchel..... Cordele	T. E. Bradley..... Cordele
Decatur	N. L. Spengler..... Donaldsonville	Gordon Chason..... Bainbridge
DeKalb	A. R. Watkins..... Chamblee	W. S. Ansley..... Decatur
Dougherty	C. W. Walker..... Albany	Hugo Robinson..... Albany
Elbert	C. E. Earle..... Elberton	L. P. Eherhart..... Elberton
Emanuel	C. R. Riner..... Summit	R. C. Franklin..... Graymont
Floyd	W. W. Mangum..... Rome	W. L. Funkhouser..... Rome
Forsyth		J. H. Hockenull..... Cumming
Franklin	F. G. Moss..... Royston	B. T. Smith..... Carnesville
Fulton	L. B. Clarke..... Atlanta	R. R. Daly..... Atlanta
Gordon	W. B. Floyd..... Plainville	E. O. Shellhorse..... Calhoun
Greene	C. O. Copelan..... White Plains	E. G. Adams..... Greensboro
Habersham	W. V. Chandler..... Baldwin	R. B. Lamb..... Demorest
Hall	A. D. White..... Gainesville	E. T. Gibbs..... Gainesville
Hancock	R. C. Wiley..... Sparta	J. A. Brown..... Sparta
Jackson	L. Landers..... Commerce	J. C. Bennett..... Jefferson
Jasper	F. S. Belcher..... Monticello	C. L. Ridley..... Hillsboro
Jefferson	J. W. Pilcher..... Stellaville	G. L. Carpenter..... Wrens
Jenkins	L. J. Belt..... Milen	W. E. Rushing..... Millen
Laurens	J. J. Baston..... Dublin	W. C. Thompson..... Dublin
Lowndes	A. Griffin..... Valdosta	J. M. Smith..... Valdosta
Macon	C. H. Richardson..... Montezuma	C. A. Greer..... Oglethorpe
Madison	L. E. Roper..... Comer	J. L. Baker..... Carlton
Meriwether	E. B. Terrell..... Greenville	P. W. Fitts..... Greenville
Monroe	J. F. Lancaster..... Forsyth	J. O. Elrod..... Forsyth
Muscogee	J. M. Crooke..... Columbus	G. S. Murray..... Columbus
McDuffie	Sterling Gibson..... Thomson	B. F. Riley..... Thomson
Newton	S. W. Everett..... Almon	O. L. Holmes..... Covington
Oconee	T. T. Elder..... Farmington	W. M. White..... Watkinsville
Ocmulgee	J. D. Herrman..... Eastman	J. C. Wall..... Eastman
Pike	R. A. Mallory..... Concord	M. M. Head..... Zebulon
Polk	C. V. Wood..... Cedartown	H. M. Hall..... Cedartown
Putnam	V. H. Taliaferro..... Eatonton	S. A. Clark..... Eatonton
Randolph	E. C. McCurdy..... Shellman	F. G. Barfield..... Cuthbert
Richmond	T. D. Coleman..... Augusta	W. C. Kellogg..... Augusta
Savannah	E. R. Anthony..... Griffin	J. M. Thomas..... Griffin
Stephens	Jeff Davis..... Toocoo	C. L. Ayers..... Toocoo
Stewart	R. L. Grier..... Lumpkin	M. Walton..... Lumpkin
Taliaferro	J. A. Rhodes..... Crawfordville	L. R. Brown..... Sharon
Terrell	J. T. Arnold..... Parrot	C. T. Kenyon..... Dawson
Thomas	W. W. Jarrell..... Thomasville	Harry Ainsworth..... Thomasville
Tift	W. H. Hendricks..... Tifton	L. A. Baker..... Tifton
Toombs	J. M. Meadows..... Vidalia	T. C. Thompson..... Vidalia
Tri	H. L. Carroll..... Babcock	C. K. Sharp..... Arlington
Troup	F. M. Ridley, Jr..... LaGrange	John Banks..... LaGrange
Walker	J. M. Underwood..... Lafayette	J. H. Hammond..... Lafayette
Ware	G. C. Rippard..... Waycross	T. J. Carswell..... Waycross
Warren	J. R. Maner..... Warrenton	R. D. Nash..... Norwood
Wayne	J. G. Tuten..... Jesup	E. C. Crummeys..... Jesup
Wilkes	A. W. Simpson..... Washington	O. S. Wood..... Washington
Worth	W. C. Tipton..... Sylvester	J. L. Tracy..... Sylvester

Journal of the Medical Association of Georgia

W. C. LYLE, M.D., Editor - Augusta, Georgia

PRESIDENT'S ADDRESS*

W. L. Fitts, M.D.
Retiring President

Gentlemen of the Medical Association of Georgia:

I wish to express to you my sincere thanks and gratitude for the honor you have bestowed upon me in holding the office of President of our grand Association.

I wish to make a few recommendations, which I think are very necessary.

Your committee at the coming session of the Legislature should push the passage of the Medical Examining Board bill. We will never have an equitable condition in the practice of medicine until we are working under this bill, or something better. We should assist them all that we can. The medical fraternity in Georgia should be a great force, if we all work together.

The Owens Bill for a National Bureau of Health has been reported favorably, by the proper committee, in Congress, and we should ask our immediate representative to assist and work in the interest of this bill, as it will be a great step forward.

There should also be a condition of reciprocity between the States, as it is unfair for a physician to have to stand an examination in several States, if he should happen to move several times from State to State. Either this should be worked for, or we should have a National Board, which, in my opinion, would be better.

Another thing, our present Councilor system is insufficient. The districts are so large it is impossible for the Councilor to devote as much time to his duty as he should. The Council has appointed a Vice-Councilor for each district, but it would be better if the Association would make some provision for the election of the Vice-Councilor, as they would feel as if they were officers of the Association, and do better work. I think we should make this provision at this session.

In ancient times the practice of medicine was a cult. From that time on, it has gone forward step by step, until we have the

modern scientific system of medicine and surgery, and we are by no means near the end. We are going forward until we are masters of the situation, and then we can in reality be looked upon as the preservers of the public health.

How most to benefit diseased humanity should be the question uppermost in our thoughts. But before we can offer to cure others, we must see to it that we are sound in mind and body. "Physician, cure thyself," is not an obsolete injunction. A man who is freely admitted into the inmost sanctuary of the home should be clean inside and out, not addicted to alcohol or any other ruinous habit, but as far as possible, spotless and pure, like the Great Physician.

If men see a doctor, in a measure immune to bodily disease, and at the same time living like that noble knight of old, without fear and without reproach, they will have confidence in his wisdom and faith in his integrity. In these days of fads and shams, when flaming, disgusting advertisements of quacks abound, and spurious medical advice fills newspapers and magazines, the same honest physician is sought more and more, and his mighty influence grows. Let us see to it that we use this influence right. Unconsciously, perhaps, we are helping to mould the character of the young into whose homes we are admitted. Is it not our duty to explain to these innocent ones the terrible effects of the transgression of the physical law? Shall we not teach them that health transcends every other natural interest, as it embraces every other? And should we not go further in the selection of our officers, both municipal and State, voting only for such as believe that the health of a people is the first duty of the statesman? As we vote, many others will vote. At the present time, on account of inequality of opportunity in the commercial and industrial world, we need all the wisdom of the best citizenship to keep down a radical socialism that would soon degenerate into an anarchy. Tried and trusty men of the professions, who come into daily contact with all classes, are the ones to stem this tide.

* Read at the 1912 session of Medical Association of Georgia at Augusta, Ga.

If a physician could be made a guardian of health in every household in which he practices, if he could know the conditions that affect health in these homes, then he could prevent much suffering, or check disease in its first stages. Often utter ignorance and neglect of the most obvious laws that apply to the preservation of health are responsible for tuberculosis, febrile diseases, etc. Often, too, grandmothers, aunts, and mothers-in-law, by the administration of their cherished medicine, work untold ill. Oftener than all, a physician is not consulted until the malady has run too long for him to check its ravages. Now if a physician were consulted once a year or more, by every family, to examine its members, it would help him to ward off diseases, and his livelihood would in no measure be lessened, and human health and happiness would be immeasurably increased. This is no ideal thing we are advocating. Such a state of things exists in other countries.

While we felicitate ourselves upon our increasing knowledge of the phenomena of disease, upon our marvellous aids and appliances for the treatment of the same, upon our greater skill in surgery, yet we must acknowledge that an accurate diagnosis often only prevents us from doing wrong, rather than helps us to do right. The unceasing, exhausting work of most practitioners leaves little time or strength for original research. What, then, can we do for the advancement of this, the oldest and noblest of the sciences? We must see to it that our successors have the best possible training. Four years is all too short a time to acquire a knowledge of all the branches of our great and responsible calling. Before a young man begins his purely medical studies we should require that he obtain a practical acquaintance with elementary physics, chemistry, and biology. Two years in the pursuit of these and germane studies would not be too much. After finishing his medical course at college, as at the present time, he should be required to pass a rigid examination before a competent State Board of Physicians, before he be allowed to begin his professional career.

Our high calling has done much to lessen pain and lengthen human life. It can do much more: it can lessen disease. We all know that the diseases of a community are connected with the conditions in which it lives. These diseases are largely pre-

ventable, for they are chargeable to wanton indulgence of appetite, reckless exposure, excessive labor, a deeply polluted soil, an unclean and pestilential surface, and an endangered water supply. It is our duty, as far as possible, to open the eyes of the people of our community to these conditions, and to work with them to remedy them. What Mr. Dowling, president of the Louisiana State Board of Health, has done for the cleaning up of his dirty State, each one of us may do for his own community; then shall we each one realize the dream of one who has said, "I see a fair city rise. Its streets are not of gold, but they are free from all defilement. Its foundations are not of precious stones, but they are laid in well cemented masonry. It has no walls, great and high, but nothing that hurts or destroys is suffered to enter it. A river flows through it, but its waters are clear as crystal.

"It is not the City of God; it is on this side of Jordan. It is the city of human possibilities, the city which men shall build at length, under the illumination of science, and the aspiration of Christian love."

POWERS OF THE STATE BOARD OF HEALTH*

Samuel C. Benedict, M.D.
President State Board of Health

Under the Act of the Legislature of 1903 creating a State Board of Health, the powers and duties of the Board were in the following order authorized:

(1) The State Board of Health shall have supervision of all matters relating to the preservation of the life and health of the people of the State.

(2) The Board shall have supreme authority in matters of **Quarantine**, and may declare and enforce it when deemed necessary.

(3) The Board shall make and enforce reasonable orders and regulations for the prevention and spread of contagious or infectious diseases.

(4) It shall be the duty of all local boards of health and the public and municipal officers of this State to enforce such quarantine and sanitary rules and regulations as may be adopted by the State

* Read at the meeting of Public Health Officers at Augusta, Ga., April 16, 1912.

Board of Health, and upon failure of any such officer to obey the quarantine and sanitary rules and regulations adopted by the State Board of Health, such person shall be subject to a fine of not more than fifty (\$50) dollars.

(5) The State Board of Health shall make careful inquiry as to the cause of diseases, especially when contagious, infectious, epidemic or endemic, and take prompt action to control and suppress it.

(6) The Board of Health shall respond promptly when called upon by the State or local government and the municipal and township boards of health to investigate and report upon the water supply, sewerage, disposal of excreta, or ventilation of any place or public buildings, but shall not have the power to supersede municipal boards of health when the same are properly maintained, but shall act in harmony with said local boards of health.

(7) The State Board of Health shall enforce the provisions of Chapter 3, Volume I of the Political Code, relating to health and quarantine insofar as the same may be done without violating any of the provisions relating to the duty of local boards of health; and the fines and forfeitures arising from the conviction of any person violating any of the laws of health and quarantine now in force in this State, or any violation of any reasonable rules and regulations for the protection of the public health of this State promulgated by the State Board of Health, shall be paid into the treasury of the city or county where said conviction was had, and to be expended in aid of the quarantine and other sanitary laws.

(8) Be it further enacted, that the said Board shall have authority to make such rules and regulations as are necessary to carry into effect the scope and purpose of this Act, especially such reasonable rules and regulations for the establishment, maintenance and enforcement of quarantine regulations as the Board, in its discretion, may deem necessary, not to conflict with the laws of the State.

(9) Be it further enacted, That it shall be the duty of the local boards of health and of physicians in localities where there are no health authorities, to report to the State Board of Health promptly upon the discovery thereof, the existence of the following diseases, to-wit: Asiatic cholera, yellow fever, scarlet fever, small-pox, diphtheria, typhus or typhoid fever, and of

such other contagious or infectious diseases as the State Board of Health from time to time may specify; and when any contagious or infectious diseases shall become or threatens to become epidemic in any county, village or hamlet, and the local authorities shall neglect or refuse to enforce sufficient measures for its prevention, the Stat Board of Health may appoint a medical or sanitary officer, with such assistance as he may require, and it shall be the duty of such officer to enforce the orders or regulations of the State Board of Health.

In compliance with the above Act, authorizing the existence of the State Department of Health, the Board passed up certain rules and regulations for the information of the people and physicians of the State, which are too lengthy to detail here. A copy of the Act, with the Board's rules and regulations, may be obtained by any one from the offices of the Board in Atlanta.

I think, however, it will be well to give you a synopsis here of these rules for purposes of information, suggestion or whatever discussion may follow:

Sec. 9—Notification of contagious diseases.

Sec. 10—Posting of quarantine card.

Sec. 12—Precautions of attending physician.

Sec. 13—Disinfection of infected houses.

Secs. 14-18—Quarantine in houses as to patients, occupants and visitors.

Sec. 18—Moving of furniture from infected houses.

Sec. 19—Isolation of patients and duration of quarantine.

Secs. 21-23—Disposal of infected bodies—transportation of—public funerals.

Sec. 24—Quarantine—how prescribed and regulated.

Secs. 25-29—Management and punishment of persons violating quarantine.

Secs. 30-31—Handling of fines and expenses.

Secs. 32-33—Establishment of small-pox hospitals.

Sec. 34—Destruction of infected property.

Sec. 35—Proclamation of Governor.

Sec. 36—Vaccination in public schools.

Secs. 37-38—Enforcement of vaccination by county or municipal authorities with penalties.

Sec. 39—Free distribution of vaccine by the Board.

Sec. 41—Sanitary regulations by county authorities.

Sec. 43—Approval of county physician and how advertised.

Sec. 44—Penalties for violators.

Sec. 45—How expenses shall be paid.

Under Section 46 local boards of health are authorized for counties and towns with some suggestions following as to their establishment, compensation of officers with their duties, etc., and under Section 51 the following is pertinent to what is the gist of all that need be said further. This section reads:

Sec. 51. Upon failure of municipal or county authorities to organize local boards of health or appoint local health officers, and where the local authorities shall neglect or refuse to enforce sufficient measures for the prevention of the spread of infectious or contagious diseases, the State Board of Health may appoint a health or sanitary officer for such municipality or county, and fix his salary and term of office, and such health officer shall have the same duties and powers as health officers appointed by municipal boards of health, as herein provided in Section 49, and the salary of such health officer, as fixed by the State Board of Health, and all necessary expenses incurred by him in performing his duties shall be paid by and be a valid claim against the county for which such health officer is appointed to serve.

It was believed by the Board that this Section of its regulations would cover all its needs for legally enforcing all other of its rules and regulations where necessary, especially in view of the Section of the Constitution which was incorporated in the rules under Section No. 40, page 14, and which reads as follows:

"The General Assembly shall not have power to delegate to any county the right to levy a tax for any purpose, **except** for educational purposes in instructing children in the elementary branches of an English education only; to build and repair public buildings and bridges; to maintain and support prisoners; to pay jurors and coroners; and for litigation, QUARANTINE, roads, and expenses of courts; to support paupers and pay debts heretofore existing."

It was found after the Board began its operation that instead of the Board having the power to force a county to pay the ex-

penses of a quarantine, that it had none at all, as it is against the general law that a county shall be assessed for quarantine; that is for the Board to enter a county, appoint an officer or officers and assistants and to be able to force its expense as a valid claim against the county. I have only recently had the opinion of ex-Justice of the Supreme Court Andrew J. Cobb, who tells me that the only way out of this dilemma is to get an act passed by the Legislature embodying the substance of Section 51 of our regulations previously read. In all other respects I believe that the Board have a very complete set of rules and regulations for its work in direction and instruction, but the only real power needed is that of being able to require a county or unincorporated town to pay the necessary expenses of a quarantine. When this can be brought about we will need nothing more to make our power as Board for caring for the health of the State effective, and it is our intention to ask or recommend to the Chief Executive that such a clause as No. 51 of our rules be made a law. We hope that the members of this body will, when the time comes, or even before then, use all the influence he can along this line to bring about its accomplishment. Without it the State Board of Health can only direct, advise and instruct without a legal power to enforce its rules and regulations, as ordered by the Legislature when it created the Board. Whether the omission was an oversight or at the time further order thought unnecessary, I do not know, but so it stands, and until it is corrected the State Board of Health has no legal power necessary to obtain the expenses to carry on a proper quarantine, either by protecting a county within itself or another county from it.

The more money The Journal of the Medical Association of Georgia makes out of its advertisements the less it costs the State Association to run the paper. This means that every member of the State Association has an interest in the advertising columns. If one business firm advertises and another does not, patronize the one that does. It is money in your pocket.

In intestinal obstruction, it is not the operation that is to be feared, but the delay in operation.

EXAMINATION OF COUNTY SCHOOL CHILDREN*

A. G. Fort, M.D.

Director Field Sanitation, Georgia State Board of Health

We concede that the prime object of education is the development of the child into a useful citizen. The State appropriates funds for this purpose in order to safeguard its own best interests. It places in every community a schoolhouse and teacher, and insists on parents taking advantage of these opportunities offered for the good of their children. While this is true, it pays little or no attention to the sanitary surroundings of or the kinds of structure used. The old log schoolhouse was a great institution in its day, the candle as an illuminant was a great thing in its day, but the price paid by those using them was defective vision and many physical disabilities.

The development of the mind, irrespective of the body, was then and is now the sole aim of the average teacher. Punishment was and is administered to those who lag, without regard to the cause. Mental development is dependent in great measures on physical development. The brain is but a part of the body and usually develops as does the body. Brain substance is essential in order to receive mental impression. The past and present basis of education is primarily the development of the mind; the building of a superstructure without due regard to the foundation, the body.

The combined results of the inspection of three rural counties in Georgia is as follows:

	White	Colored	Total
Anemia	894	774	1,668
Defective Vision ..	292	28	320
Defective Teeth....	596	368	964
Enlarged Tonsils..	406	252	658
Adenoids	400	144	544
Defective heart sounds	77	20	97
Sounds indicative of pathological conditions in lungs	33	72	105
Diseases of ears....	110	2	112
No. examined	1,663	1,556	3,219

It is not necessary to call to the attention of this audience the evil effects on the physical and mental child of these defects.

In the inspection of the sanitary surroundings of fifty-nine of these schools, we found seventeen privies only, and all of these poorly constructed. Is it any wonder then that 1,668 gave clinical evidence of hookworm infection and microscopical examination revealed that an average of 74.7 per cent. of the suspects were infected.

The people in the rural districts are called on to send their children to schools equipped thus. We are all required to support these institutions for the teaching of these children, many of whom are absolutely unable to take advantage of these opportunities and many others able, only to a limited extent, to do so. Would it not be far better to first place the child in proper condition to go to school and then protect him after he gets there? In the future the basis of education must be the physical man first, the mental side of him will then take care of itself, if directed along the proper channels.

The question naturally arises as to how this can be done. Educators are rapidly recognizing their failures and are realizing as the cause the facts above stated. They are anxious for us to aid them and will, unless we do, ask legislative aid in the matter.

Many States have adopted a system of medical inspection. A majority protect only the children in the cities, although a few extend their work to the rural communities. This paper has as its object to show the need of it in the rural districts of Georgia.

THE MEDICAL MILK COMMISSION AND ITS RELATION TO PUBLIC HEALTH*

Clarence A. Rhodes, M.D., Atlanta

In presenting this subject I have nothing new to offer the profession, but want to emphasize the importance of the great movement which is spreading over the world for a better and cleaner milk supply for our cities, and more especially for our children and patients. Since maternal lactation is a rapidly disappearing func-

* Read before meeting of State, County and Municipal Health Boards, Augusta, Ga., April 16, 1912.

* Read at meeting of Public Health Officers at Augusta, Ga., April 16, 1912.

tion, the relation of milk to nutrition has become one of the most urgent fundamental problems presented to mankind to-day.

It is a well-known fact that impure milk fed to young children causes a large percentage of deaths among babies. About ninety-five per cent. of diseases of the digestive organs that are so fatal to young children, especially those that are artificially fed, are due simply to impure milk. Pure milk is one of the most valuable foods; it contains, in easily digestible form and in proper proportions, all the nutritive substances required for the body. It is also one of the cheapest foods, containing more nutritive material than can be obtained at the same cost in any other food. Valuable though it is as a good, unless properly handled, milk is a source of danger because it rapidly spoils and is easily contaminated. Good milk is simply clean milk, and unless it is handled and produced in the most cleanly manner, it quickly becomes bad milk. Milk being the chief article of food for young children and infants, the necessity of obtaining it pure and clean cannot be over-estimated.

Ordinarily you can detect any bad food stuffs that are delivered at your home; unfortunately impure milk cannot be detected by its appearance. It is simply impossible to detect adulterations or contaminations in the kitchen. Impure milk contains bacteria that are dangerous from their number and variety, and it does not differ in appearance from the pure article. Even good milk spoils rapidly through bacterial contamination unless kept cold. In twenty-four hours, at ordinary room temperature, each bacterium increases about 435 times. These bacteria originally enter the milk from the dirt of the stable, careless handling and improper cleansing of the hands, milk pails, bottles, etc., etc. They multiply rapidly if the milk is allowed to become warm, whereas if it is kept at or about 45° Fahrenheit—a point well above freezing, the bacteria are unable to multiply.

Spoiled milk cannot be made into good milk by any process on earth. Pasteurization and sterilization are only preservative methods; the necessity for them is conclusive proof of contamination which might have been avoided. Furthermore, these methods involve the use of heat, causing chemical changes in the nature of the

milk, thus rendering it less valuable as a food, although less dangerous.

According to Von Behring, in Germany of every 1,000 children born alive, 235 succumb during the first year of life. Only 510 out of 1,000 males born attain manhood. Not more than a third of those reaching maturity are found to be fit for military service. These sad facts Behring attributes very largely to the ulterior effects of infection derived in infancy from milk. There is only one other period of life in which the chance of death is greater than it is under one year, namely, in persons over ninety years old. Diarrheal diseases in infants are generally accepted to be due to impure milk; but there is no reason to believe that the alimentary tract of the average infant is so often incapable of digesting the food necessary for growth and development when the food supplied is of suitable quality and quantity. A child consumes about 500 quarts of milk during its first year of life; thus it is seen the chances for infection from this source are great. It is a well-known fact that the proportion of deaths among infants is greatly reduced when they receive pure cow's milk properly modified or the food Nature designed for them, namely, mother's milk.

Recognizing the importance of pure milk for clinical purposes the Medical Society of New Jersey in 1890, under the leadership of Dr. Henry L. Coit, appointed a committee of forty physicians to make an investigation of the milk supply as far as it affected the public health. The committee's report showed the direct relations between mortalities and milk, and for two years tried to get legislation for a strict scientific supervision of all the dairies in the State and thus improve the character of the milk. The effort resulted in little except to arouse the profession to the importance of the subject of pure milk, and through the press, to stimulate the laity to a widespread interest in the dangerous character of impure milk.

Having failed to obtain prompt relief through the law, which as a rule operates slowly, another plan was adopted whereby the physicians themselves might supervise the production of milk and thus be perfectly sure of its purity. The plan was submitted to the Practitioner's Club, of Newark, New Jersey, in January, 1893, by Dr. Coit, in a paper read entitled "A Plan to Procure Cow's Milk for Clinical Pur-

poses." The plan was endorsed by the Practitioner's Club and a search was begun for a dairy with suitable equipment to carry out such rigid regulations. After a diligent search of several months one was found—that of Mr. Stephen Francisco, of Caldwell, Nev. Jersey, who was the first to sign so stringent a contract, and assume the obligation to conform to the dictation of a Medical Milk Commission, and on April 13, 1893, the production of what is known as "Certified Milk" was begun. The term "certified" was coined by Dr. Coit and copyrighted by Mr. Francisco, with the understanding that any milk commission should have the right to its use.

The original scheme of the production of this clinical milk was as follows:

"1. That physicians give their practical support to an effort conducted by a medical milk commission selected by a medical society which shall endeavor to bring to the city a supply of milk produced under such regulations that purity shall be assured.

"2. That approved and trustworthy dairymen, possessing honor, financial ability and dairy facilities shall be induced by reason of promised medical support and the increased price of their milk, to conduct their dairies, collect and handle the product in conformity with the code of requirements made by the aforesaid medical milk commission and imposed by it in due legal form.

"3. That the duties of the commission shall be, first, to establish correct clinical standards of purity for cow's milk; second, be responsible for a periodical and personal inspection of the dairy or dairies under its supervision; third, to provide for bi-monthly expert examinations of the dairy stock by competent and approved veterinarians and for the medical supervision of the employes by competent physicians. The milk produced shall also be subjected to periodical chemical analyses and to bacterial counts made under the direction of the commission as often as in its judgment is desirable. The experts employed by the commission shall render their reports to this body, which constitutes the basis of its certification of the product. The expense of examination and inspection shall be defrayed by the dairymen, but the members of the commission shall receive no pay for their services. The findings of the commission shall be

published to the profession only. The milk thus produced shall be known as 'certified milk' and be sold in containers bearing the date of milking and the seal of the commission."

These were the standards determined upon by the first medical milk commission, for "Certified Milk." From time to time these standards have been raised and the supervision made more definite.

In February, 1907, the Cincinnati Commission, of which Dr. Otto P. Geier was secretary, suggested that the various milk commissions hold a conference in connection with the meeting of the American Medical Association at Atlantic City. A temporary organization was formed. Dr. Henry L. Coit, Dr. Otto P. Geier, Dr. Samuel McD. Hamill, Dr. Royland G. Freeman, Dr. William H. Park, and Dr. Thomas W. Harvey, acting as a committee, formulated a program and called the conference for June 3, 1907, at Atlantic City.

This conference was remarkable, as delegates were present from twelve different States, representing twenty-one commissions in as many cities. Over one hundred leading hygienists and physicians attended this meeting; much work was accomplished, which resulted in a permanent organization to be known as the American Association of Medical Milk Commission. Thus the organization has become a national one and so far has held five annual meetings, the sixth is to be held at Louisville, Ky., on April 30th and May 1st of this year. The work is of such vast importance that it is rapidly spreading from city to city.

The keynote of the Association is embodied in one clause of its constitution: "The purpose of this Association shall be to federate and to bring into one compact association the medical milk commissions of the United States; to exchange views and to adopt uniform methods of procedure in the work of the medical milk commissions; to fix chemical and bacteriologic standards; to determine the scope of the veterinary inspections and to foster and to encourage the establishment of medical milk commissions in other cities."

Let it be understood that it is not the purpose of the medical milk commission to attempt to supersede the State legislation nor municipal ordinances of Boards of Health employed to look after the general milk supply. A board of health has its legitimate functions and the medical

milk commission its own special objects. The board of health attempts to secure good milk by the enforcement of ordinances which prohibit the sale of unclean milk. The medical milk commission furnishes a milk which is so pure and so far above the requirements of the law that it is not under the law at all.

The influence of health boards are too remote from the thing desired, the scope of their demands too limited and their standards too low. They are not in touch with the actual dairy work, except through paid officers, who act as policemen and do not try to stimulate the best efforts of those to whom we must look for what we need.

Legislation and ordinances may require market milk to be clean, but how it shall be made clean they cannot define. Law never has and probably never will determine what is to constitute a healthy cow, a good food, suitable care and housing, a clean hand, a sterile container, a clean pail, a clean udder, or a proper workman. Initial cleanliness is the one great principle involved in securing clean milk.

It is a well-known fact that the principle means by which typhoid fever is distributed in places where there is a safe and hygienic water supply is through milk. When it is recalled that from two to four per cent. of all typhoid cases become typhoid carriers it is easily seen how the milk may become infected unless there is strict medical supervision over those employed to handle the milk.

Harrington in 1907, writing about the epidemics in Massachusetts, makes the following statement:

"In the public mind outbreaks and epidemics of this disease (typhoid) are commonly associated with polluted drinking water, but when water supplies are properly guarded, as in Massachusetts, for example, they are more commonly found to be caused by contaminated food, and especially by that one which is most subject to pollution and which offers the specific organism the most favorable conditions for preserving its virulence and increasing its numbers, namely, milk. During the past two years, of eighteen local outbreaks of typhoid fever in different parts of Massachusetts investigated under my direction, fourteen were traced to milk."

Raudnitz, of Prague, states that one-fourth of the epidemics of typhoid fever in Austria are traceable to contaminated

milk, and McCrae records that an inquiry into the causation of 638 epidemics of typhoid fever showed that in seventeen per cent. the infection was conveyed by milk. Epidemics of scarlet fever and diphtheria have been frequently traced to milk.

Milk as a diet for the sick and the influence of impure milk on the duration of sickness and on the death rate when milk is employed as an invalid diet is difficult to demonstrate statistically; but when we consider the increased susceptibility of the feeble and aged persons to infection and the diminished resistance offered by the sick, there can be no doubt that contamination of milk is a factor and plays a part in keeping up the rate of sickness and death.

In 1901 Koch, at the International Congress on Tuberculosis held in London, made the announcement that bovine tuberculosis is transmissible to the human subject to only a slight extent if at all. This doubt, however, cast on the relation of cow's milk and tuberculosis has disappeared to a great extent, on further investigation made by a host of observers, the most prominent among whom is Von Behring, who claims that milk fed to infants is the chief cause of tuberculosis in man. The German Commission on Tuberculosis found over ten per cent. (six out of fifty-six) cultures of tubercle bacilli of human origin, virulent for cattle. In a similar series of tests conducted by the British Royal Commission on Tuberculosis, sixty cases of the disease in the human being were tested with the results that fourteen were claimed by this commission to have been infected from bovine sources. Latham estimates that not less than twenty-five to thirty per cent. of the cases of tuberculosis which occur in early childhood are due to intestinal and, therefore, presumably to food infection. Park and Ravenel both furnish strong proof that the tubercle bacilli may traverse the intestinal wall without damage to either and establish infection in bronchial glands or serous cavity. Of deaths in 1905 from all forms of tuberculosis in the registration area of the United States, about one in thirty-nine was among infants under one year, and one in about fourteen among children under five years of age. Ravenel reports that of five cases of tuberculosis in children, two received their infection from cattle. Theobald Smith has estimated that from twenty-five to fifty per cent. of the cases

of human tuberculosis starting in the cervical and mesenteric lymph glands are bovine in origin, while Park has found four cases of bovine infection out of eleven cases of generalized tuberculosis of infants, and three cases due to the bovine type of bacillus out of sixteen cases of tubercular adenitis.

In 1906 the health officer of the city of London reported that at least eight per cent. of the milk sold within the city limits is derived from tuberculous animals, and that of 500 cows examined after slaughter by the city veterinarian evidence of tuberculosis was found in 46.8 per cent. Mohler estimated that probably twenty-five per cent. of all the cows which supply milk to the District of Columbia are tuberculous and points out the practical value of the tuberculin test and insists that all milk should come from neither tuberculin tested cows or be pasteurized by the Health Department.

With these important facts confronting us the question naturally arises, Who would be the best supervisors of the production of milk especially designed for clinical purposes? The answer is simple—the physician. It is not only his duty to discover means to prevent disease, but also to institute and conduct crusades against many evils which menace human life. He is more generally informed concerning the origin, nature, and source of such conditions; he is the best judge of matters concerning the public health and is the best equipped person to wage war against these evils. Realizing this the leaders of our profession have aroused themselves to the great duty imposed upon them and have organized the American Medical Milk Commission to spread the "Gospel of Clean Milk" over our land.

The more money The Journal of the Medical Association of Georgia makes out of its advertisements the less it costs the State Association to run the paper. This means that every member of the State Association has an interest in the advertising columns. If one business firm advertises and another does not, patronize the one that does. It is money in your pocket.

The sooner a hollow bone is opened in acute osteomyelitis, the less will be the destruction of bone.

POSSIBILITIES OF LABORATORY AND BACTERIOLOGICAL WORK IN MEDIUM AND SMALL SIZED TOWNS*

W. W. Brown, M.D.

City Bacteriologist of Athens, Ga.

This subject for a few brief remarks was prompted by two outstanding conditions existing in the health departments of the State at the present time.

First: The very limited number of towns in our State supporting a laboratory, and realizing the necessity of employing a bacteriologist, and so controlling the health problem to a large extent by these means.

Second: The very gratifying results which have attended the establishment of such a department in the towns where it has been given a thorough trial.

A town cannot foster any enterprise which will prove of more direct benefit to itself than the establishment of an efficient health department, with a laboratory equipped for the general work which may come under its supervision, and so control to a large extent, by prompt examinations and reports from the laboratory, followed by immediate quarantine, the health and welfare of its citizens.

Just here I wish to say that you are to understand clearly that we are not to consider, at this time, the efficient work done in the laboratories of the larger cities of the State, but rather the possibilities of the laboratory as it may be established and supported by the smaller towns, with only a limited amount of expenditure, both for equipment and maintenance from year to year. Also the results obtainable from the establishment and maintenance of such a laboratory to the town itself, and the surrounding community.

That we may deal in actual facts that have been tried and proven, and not base what is said on mere theory, with your permission I will outline the work done in the laboratory of one of our medium-sized towns, which has eagerly grasped the idea of a city laboratory and the employment of a bacteriologist who shall give his entire time to this work.

While there may be room for improvement in the outlined work which follows,

* Read at meeting of Public Health Officers at Augusta, Ga., April 16, 1912.

it is well deserving your consideration, when you take into account the restrictions imposed upon the department because of the limited funds appropriated for the work each year by the city council.

We may divide the laboratory work which may be done in a laboratory of this kind into four distinct phases, as follows:

First—General Bacteriological Work: Including such laboratory examinations as diphtheria, malaria, tuberculosis, intestinal parasites, widals for typhoid, etc. The laboratory findings are of inestimable value both as an aid to diagnosis and also as a means by which dangerous diseases may be quarantined or other suitable steps taken while the disease is in its infancy.

Second—Systematic Examination of City Water Supply: Samples are taken every other day from river, lake and wier and tests made in the laboratory as prescribed by the State Board of Health, and so accurate record of condition of the city water is always on hand.

Third—Milk Analysis: (a) Bacteriological, (b) Food Value: The number of bacteria in the milk, the general appearance, presence of dirt, etc. The specific gravity, per cent. butter fats, total solids, presence of pus, etc.

Fourth—Medical Inspection of Schools: A physical examination of every child attending a public school by a graduate of medicine. Defects recorded and steps taken to alleviate the condition.

Just a few words as to each of these departments, based upon the work as it has occurred in the town under consideration.

It is not an easy matter to say which of these phases of the work should receive the most attention. They are all important and necessary and each has its place in the department.

The bacteriological department has done much to control certain diseases which caused more or less trouble before its establishment, as well as being of general service to the physicians of the town, and through them to the entire community.

The diphtheria situation, as it now is and previously existed, speaks for itself. Although the cases of diphtheria now reported are, perhaps, three or four times more than the number reported before the laboratory was established, yet with the laboratory open to all physicians and urging them to take cultures of every sore throat, no matter how mild, there no longer occur epidemics of ulcerative sore

throats, as was the case previous to the establishment of a laboratory. The medical profession as a body appreciate the advantages offered by the laboratory, and avail themselves of every privilege. Since the laboratory has been established it is indeed a rare occurrence that a death is reported from any throat condition. This was not the case before cultures were systematically taken and early treatment administered following the laboratory report. The other diseases which may be diagnosed or aid given in diagnosing, such as typhoid, malaria, tuberculosis, intestinal parasites, etc., all speak for themselves in praise of the results obtained from laboratory work.

One of the simplest examinations made in the laboratory is that for the presence of hookworm, yet how many children in almost every town and community, especially in certain parts of the State, are suffering from the debilitating effects of hookworm.

The water supply of any town by its known purity, or suspected impurity, will make or mar that town, as the case may be, in a very little while, from a health standpoint. If a town is questionable from the standpoint of health, that town can never be what it might have been along other lines of achievement.

The town that can say we know that our water supply is pure and wholesome, and if it becomes contaminated we will detect it, almost immediately, and protect our citizens from danger until it is purified; this town can rightfully expect the best of health, the confidence of every citizen, and along with this, prosperity and development. In the laboratory under discussion, samples of water are taken every other day from river, lake and wier, and tested as prescribed by the State Board of Health. After each test a report is sent from the laboratory to the President of the Board of Health, to the Mayor of the town, and to the Superintendent of the Water Works. With the first signs of approaching danger in these reports, investigation is made and steps taken to alleviate or entirely correct the existing condition at once.

There are no laws to close up the wells of the town, but the high standard of the city water and the confidence of the people in the Department of Health, coupled with the universal good health of those using the city water, has converted prac-

tically every one who is in touch with the water works system into a city water drinker.

The guarantee of pure water, perhaps, means more to the general public than any other phase of the laboratory work.

Milk Analysis—The subject of milk analysis has a two-fold meaning:

First, and of most importance from a health standpoint, the purity of the milk from a bacteriological view. An accurate bacteria count is made from each sample, the general condition of the milk noted as to presence of dirt, etc., and a microscopical examination for pus.

The second principle in milk analysis is food value. Is the milk up to the required standard from a nutritive standpoint. Along this line tests are made, taking the specific gravity, per cent. of butter fats, total solids, etc.

The milk of all dairies, any milk from which the public is in any way supplied, is subject to analysis at any time and must not fall below given recognized standards either in the number of bacteria present or in food value. With this examination made, impure milk may be rejected, and much valuable information given the physician as to the qualities of different milks for use in infant feeding and otherwise.

The Inspection of Schools—Examination of every child attending a public school by a graduate of medicine. The child is examined for the following conditions:

- (1) Vaccination scar;
- (2) Nutrition;
- (3) Eyes (a) local, (b) test for sight;
- (4) Anaemia;
- (5) Pediculosis;
- (6) Seborrhoea;
- (7) Enlarged glands;
- (8) Teeth;
- (9) Tonsils;
- (10) Nasal breathing defect;
- (11) Skin defect;
- (12) Cardiac;
- (13) Pulmonary;
- (14) Nervous;
- (15) Ears;
- (16) Bone.

Of these conditions the following require medical attention and a certificate from a physician before the child is readmitted to school:

- (1) No vaccination scar;
- (2) Pediculosis;

(3) Some local eye conditions (pink eye);

(4) Some skin defects.

Sore Throats: The inspector takes a culture from all sore throats and reports the findings on the following day.

Any diseased condition not listed above found in a child under inspection, is recorded and the inspector uses his discretion as to debarment of the child from school.

The strongest argument for a systematic inspection of schools is the fact that in the city under consideration eighty-five per cent. of the children examined were found to be defective, the defects ranging from marked pulmonary defects through the entire list. Often a child of a prominent family is found with tonsils greatly enlarged and inflamed decayed teeth, and consequent anemia and general debility. By the method used, the parent is written a personal letter, stating the conditions found at the examination of the child, and urging him to place the child under the care of a physician or dentist as early as possible.

The child is re-examined by the attending physician. Upon a card furnished he writes his diagnosis and treatment prescribed, and this card is returned to the laboratory and filed.

The importance of school inspection is being recognized more and more, and the results obtained show clearly that this is a much needed, yet sadly neglected, phase of public work.

It seems that the benefits derived from the operation of these four phases of work would well warrant the establishment of a city laboratory in any or all of our medium-sized or small towns.

The essentials to the successful management of such a laboratory are three:

First: An equipped laboratory.

Second: A bacteriologist who is also a graduate of medicine.

Third: Running expenses of the laboratory.

(1) **To equip a laboratory** in a small town, not for advanced laboratory work, but a laboratory that may creditably care for the work outlined above, will require approximately \$600.

(2) **A bacteriologist.** There will be little difficulty in finding a man who will satisfactorily fill this position. A graduate from a recognized medical school

with a few additional months spent at the offices of the State Board of Health, from which place he may receive a certificate of proficiency, will fill the position in an acceptable manner.

The bacteriologist's salary may be fixed according to the man obtained and the resources of the Health Department. We may consider \$1,200 an average salary for such a man.

(3) **Running expenses of the laboratory.** The expense is governed principally by two things:

First: The amount of work done;

Second: The management of the laboratory and elimination of unnecessary expense.

In many of the city laboratories culture media, agar, agar, Löffler's blood serum, etc., are bought from manufacturers at considerable expense. This may be well considered a useless expense. With care and experience the bacteriologist may prepare his own media at practically no expense except his time. Many other laboratory conditions may be met in the same way.

Considering the general work of a laboratory of this class \$300 should cover the running expenses for a year.

We may say that \$600 will equip a laboratory which will be an honor to any small town, and \$1,500 each year will support it and bring results that cannot be gained from any other source.

It is hoped that what has been said, based on practical experience, may cause some of our smaller towns to investigate more thoroughly the possibilities and benefits to be derived from the establishment of a city laboratory.

SOME UNUSUAL CASES OF NYSTAGMUS

A. W. Stirling, M.D., C.M. (Edin.), D.P.H. (Eng.)

Ophthalmic Surgeon to the Grady Hospital, Atlanta

The following cases, which I have had previously published in this country, may perhaps have some interest for such of us as deal with nerve cases, as well as for the ophthalmologist:

The first is a case of Voluntary Nystagmus, a most unusual occurrence, and the only one which I have ever encountered.

In fact, it is, so far as I am aware, hardly ever even referred to, but it has its own particular interest. It was curious that a few months after I had made notes upon this case. Dr. Elliot, of Madras, in India, who does an enormous amount of eye work, should have published in the Ophthalmoscope of February, 1912, a case very similar to mine.

In the Ophthalmoscope of January 1, 1910, (page 15), I published a case of nystagmus of an unusual character. In it the involuntary movements took place only when the lids were closed. The following may likewise merit publication:

Voluntary Nystagmus

Mrs. J. D. L.—Age 24. Came complaining of pain in and over the eyes. The refraction was as follows: R V—6-12 HM—2'O D=6-9 no cyl. L V—6-60 HM—4'5 D=6-18 no cyl. The fundus was normal. There never had been strabismus. There were 5'O of latent convergence, and the right eye looked down 4 O. But the interesting point in the case lay in the fact that ever since childhood she had been able at will to produce a voluntary nystagmus. The ocular excursions were too rapid to count, almost as rapid as one can shake one's hand from side to side, horizontal, and perhaps about one minute in length.

A case of Voluntary Nystagmus by R. H. Elliot, M.D., Lond., F.R.C.S. Eng.; Major I. M. S.: Superintendent government Ophthalmic Hospital, Madras, India.

In the leisure of a board-ship passage out to India recently, a fellow passenger showed me a curious eye-trick, of which he seemed not a little proud. He is a chemical expert, with the degree of Ph.D. of Heidelberg, and it naturally follows that he is very highly educated, and a good observer; he is an active man of good physique and of exceptional powers of endurance; his age is 30; he has, according to his own statement, exceptionally keen distant and reading sight. I had no means of testing this by types, but he could pick up objects on the horizon quickly and well. He has never had headaches or any other signs of eye-strain; he has been able to produce nystagmus voluntarily as long as he can remember; to do so he stares straight in front of him, and within a second or two the phenomenon begins. It is a binocular, horizontal, oscillatory movement; the amplitude is

large and the movements are too rapid to count. There has never been a movement in any other direction other than the horizontal; the oscillations cease as soon as, or very soon after, the voluntary effort is relaxed. When he wishes to produce the nystagmus, he is conscious of a sense of effort which he refers to the situation of the external recti muscles of both eyes. During the nystagmus, objects appear to be blurred in the sense that they are drawn out sideways; a feeling of tiredness, which is becoming more marked now, as he grows older, attends the production of the phenomenon. On several occasions of recent years he has noticed that the nystagmus has commenced spontaneously; this has occurred when he has been overtired; he has been able to control it, almost at once, on such occasions. On the other hand, it is easier for him to produce the nystagmus when he is fresh than when he is tired.

I can only find the scantiest references in some of the larger text-books to the existence of the phenomenon of voluntary nystagmus, and I cannot remember to have met with a similar case previously. I therefore publish these notes, although they are necessarily scanty and somewhat unsatisfactory.

The following case was reported to the Southern Medical Association in 1909:

For the last two years, only on **closing the lids**, the eyes of a lady, aged 20 years, have made lateral nystagmic movements, 85 to 100 double motions a minute. This stops during sleep, and for about one minute she can hold the eyes still by an effort, during which, however, the upper lids constantly quiver. On looking up, with the eyes open, there is some tendency to a similar movement, but it is not constant. Refraction is about 1 D cyl.; axis oblique=6-5. There is a latent divergence of 3°. The patient has always been rather nervous and "jumpy," has floating kidney, and suffers during menstruation and from rheumatic joints.

Nystagmus with Shaking Head

Mr. V. T. B.—Age 76. Wants glasses. His vision has always been poor. Under homatopine and cocaine: R V—) 6-60 C—1'0; Dsp=6-60; L V—6-36 1½ C—'75 Dsp=6-24 1-3. Right pupil does not act to light but does to accom. and consensually. Left pupil is normal. Both discs are rather pale and waxy. No exsintis pigmentora

of the usual order; some mottling round discs. On making patient look to one side and up, a lateral nystagmus is developed. On inquiry it then appears that out of eleven children in the family, one brother and one sister had nystagmus. Their sight was "good" and they were not albinos. These two also developed a constant, quick jerking to and fro of the head, "spasmus nutaus," which they could stop at will. A daughter of the afflicted brother (she is now 68) has also nystagmus and a similar shaking of the head.

Almost Albinos, Without Nystagmus, But With Poor Vision

In the following two cases are associated a state verging upon albinism without nystagmus, but with a low acuity of vision:

Miss L. G.—Age 29. Is nearly an albino, but her eyes are distinctly blue. Her brother is an albino with nystagmus. Her vision is as follows under homatopine and cocaine: R V—6-36 C + '25 Dsp + 3'0 D eyl. ax. 50° 6-18 (1½). L V—6-60 C + .5 Dsp. + 3'0 D eyl. ax. 105° 6-12 (1½). Two days later ordered cylinders=6-12 (1½). The fundi were very pale.

Miss M. B.—Age 7. Has always had poor sight. Her fundi contain no pigment. Had very pale hair as a baby, but her eyes were always blue. Under a mydriatic: R V—) 6-60 C-7 Dsp 6-60. L V—) 6-60 C-9 Dsp. 6-60.

Albinism with Permanent Foramen Ovale and Nystagmus

The appearance of the following patient is remarkable, seeing that in her skin and mucous membranes are combined the coloring of an **albino** and that of the blood in one in whom the **foetal opening between the two cells of the heart has never closed**. Slight nystagmus is also present, but is now much less marked than formerly. There is a little blue color in the irides. R V—6-60 + 6'0 D 6-60. L V—6-60 + 5 '5 D 6-60. There is convergent concomitant strabismus.

As the title of the paper indicates, the foregoing cases are not among the common types of nystagmus, which are two, namely, that showing itself first in infancy, though generally continuing during life, and associated with defective vision, and that developing in adult life in connection with certain employment. The infantile form is doubtless related to the fact that central macular fixation is not ac-

quired till some weeks after birth, and that where the media are opaque or the receiving nervous sphere defective, acute central perception is not developed at all. The young eye, therefore, does not become fixed, and a habit, probably a search for acute vision, is established, which takes the form of nystagmus. It is to be noted that congenital blind eyes are not nystagmic; and also that though the eyes are ever on the move as a rule, the object looked at is not thereby affected to the mind of the patient. This is not always true, however, in nystagmus acquired in adult life.

Miners' nystagmus is the typical adult form, and it is generally supposed to be a myopathy, a sort of trade spasm, or occupation neurosis, although some authorities doubt this explanation.

The cases here recorded are in different categories. The rapidity of movement in voluntary nystagmus would probably suggest that there is a natural tendency to nystagmus in a seeing eye, which is normally obliterated by the fact of central vision, and that this intuition can be performed voluntarily by a few isolated persons. The association of nystagmus with shaking head, which is a better known phenomenon, and which may perhaps somewhat resemble other associated movements in which the eye has a part, as with certain motions of the mouth the so-called explanation "of rhythmic activity of nerve centers" is a subject on which neurologists are interested. This form sometimes disappears entirely.

The constant association of nystagmus with albinism is interesting, though more simple, because the lack of ocular pigment interferes with any well defined central vision. The borderland cases, which I quote, are, I think, instructive. In these the patients are sufficiently nearly albinotic to have very defective vision, but not so defective in pigment as to be nystagmic.

When dealing with a sliding hernia don't attempt to separate the large bowel from the sac; this attachment carries the blood-supply of the gut. Free the sac, not the intestine, and reduce with the bowel as much of the sac as is attached to it.

Vesical calculus is very common among the Chinese, appendicitis very rare.

THE OPERATIVE TREATMENT OF RECENT FRACTURES*

Frank K. Boland, M.D., Atlanta

The operative treatment of recent fractures has lately attracted considerable attention in medical literature. One writer has said that the profession is turning from the surgery of the abdomen to the surgery of bones. If this be true, it is not a change which can endure. No other part of the body can ever present the allurements and opportunities of abdominal surgery for fascinating work and brilliant achievement.

There is a large class of fractures in which incision and direct fixation by wiring, plating or other means is clearly indicated, such as cases of delayed union, non-union and faulty union, some compound fractures, and some fractures complicated by injury to vessels, nerves and other structures. It is not of these that I wish to speak. The question is as to the advisability of operation on simple fractures within the first few days of treatment. Since 1892 such a plan has been enthusiastically advocated by W. Arbuthnot Lane, of London, and used by him practically as a routine treatment. Many followers of Lane have arisen in America, and the number is growing.

Mr. Lane's method approaches the ideal, as much so as any procedure in surgery. It sounds reasonable to say that the best way to repair a broken bone is to expose the break to view and to direct manipulation, and thus to be enabled to put the ends back together perfectly. With tissues of various kinds so often found between the fragments, no wonder we could not get better results by our old methods of working in the dark. How could this tissue be removed unless we saw it and removed it? How one could "set" a broken leg with a few passes and pulls, without actually seeing what he was doing, always mystified me as a student, and now, alas, I find that many of them were not "set" after all, any more than I thought they could be!

But we have done our best with the lights before us. The point is now, whether Mr. Lane's method is better than the old one, and is it always safe? With

* Read at the 1912 session of the Medical Association of Georgia, Augusta, Ga.

him it certainly seems to be so. But I am told that his technic is the most perfect in England, and it is to this more than to any other one thing that he owes his success. Much time is spent in careful preparation of the field of operation. Although gloves are worn, no hand is allowed to enter the wound. Specially constructed, long-handled instruments are used, and the tissues are treated with great respect and delicacy.

Those in America who have followed Lane's method the most closely have had the greatest success with it, and use it and praise it the most. But such radical treatment is not for the novice or for the unexperienced or for the unequipped. I believe we are approaching a time when direct fixation of fractures will supplant the older methods in a great many cases, but such a departure, to be safe, must be slow. The majority of us can use it only in selected cases, and those who are getting satisfactory results with their present well-tried plans of treatment, will be justified in standing by them for a long time to come. Many splendid results have been obtained by the old methods in the past, and can be in the future. But the splendid results of yesterday are not called splendid today, and the splendid of today will not be splendid tomorrow. A half century ago the surgeon was content if he got "laudable pus," and his patient did not die from sepsis, but how laudable is pus today?

I am not advocating the operative treatment of recent closed fractures as the usual method to be employed. With me the cases in which I use it or recommend it are exceptional, but the list is growing. Today I believe that with the exception of a very few fractures, which I shall mention, a conservative plan of treatment should continue to be given first choice and a fair trial before an operation is undertaken. If the prognosis is good for a useful limb with a minimum deformity, an operation is ill-advised.

The X-ray has done more than any other agency to further operative treatment, but it also has hurt it in that it frequently has been responsible for unnecessary and harmful use of the knife. Through the X-ray we have learned that a perfect anatomical result in a fracture with displaced fragments treated by manipulation and splints is almost an impossibility. But with the present skill and preparation of

the average surgeon, every case of imperfect approximation of fragments, as seen with the Roentgen ray, by no means calls for wiring or plating. If the case is really one of mal-union that is another story, but if the functioning result is good and the deformity not bad, usually it is a case to let alone.

Many things stand in the way of success in the operative treatment of fractures, and it cannot be counted on always to give perfect results. The work is tedious and difficult. Hemorrhage is apt to be severe, and shock is easily produced. Sometimes the fragments cannot be put in perfect apposition, even when we are handling them directly. We may find the fracture comminuted, and may have to remove so much loose bone that shortening will occur. Again, infection may spoil the whole procedure, or our wire may break or screws come out, or may have to be removed later to cure a sinus. And finally, the cases must be chosen with due regard for age and general condition.

I have operated upon eight recent fractures with good results in all except one. These fractures were three of the shaft of the femur, and one each of the patella, surgical neck of the humerus, os calcis, clavicle and both bones of the forearm. These are exclusive of fractures of the mandible, which usually are compound, and do not come under this discussion.

There is one fracture which I am almost ready to say should be operated upon always, and that is oblique fracture of the shaft of the femur, which is the variety I had. I have never seen anything better than a fair result obtained by any other plan of treatment. A poor result is the rule. A transverse fracture may be kept in apposition, but an oblique fracture is apt to slip and override in spite of any kind of retentive apparatus. This is due to the great length of the bone, to the powerful muscles pulling on the fragments, and to the fact that there is no parallel bone splinting it, as there is with the bones of the forearm and the leg. I wired two of my femur cases and plated one. The majority of late operations for delayed union and for vicious union, which I have done and have seen done, have been on the shaft of the femur.

In the proper environment I believe it is best to wire fractures where there is much separation of the fragments, such

as those of the patella, olecranon and os calcis. In the most favorable cases without operation the union is slow and liable to be fibrous and weak.

There were special indications in my clavicle case and forearm case. The clavicle was broken in two places and one fragment was so depressed that it could not be raised without an incision. The fragments were sutured with kangaroo tendon, and the outcome was very satisfactory. The operation on the forearm was done when the fracture was a week old. Both bones were overriding and the deformity could not be reduced. Through an incision the radius could be approximated so nicely that it was not deemed necessary to unite the ends with any kind of suture. This, of course, is a fortunate condition, and should be taken advantage of whenever possible. The ulna was united with kangaroo. The result was perfect.

The case with fracture of the surgical neck of the humerus died from shock, whether from the manipulations of the freshly broken bone or from the anesthetic I do not know. But I was impressed with the importance of allowing sufficient time to elapse before operating on cases which had been subjected to severe violence. This patient was a small boy who had been thrown from a horse. The fragments could not be approximated at all, and operation was done the third day after the accident, when all shock apparently had passed. This was another case in which the fragments could be perfectly approximated and held so without sutures.

I have had little to say about the details of technic in doing this work because with our present knowledge and experience it is hard to lay down definite rules, although they seem to be well established in the work of Mr. Lane. Sometimes we use silver wire or aluminum bronze wire, sometimes animal sutures and sometimes plates or nails. Murphy, of Chicago, recently reports great results in transplanting a part of the crest of the tibia between fragments, and another surgeon has gone back to the first operation ever done and has taken a rib from his patient to use as a wedge between fragments. Until this work is further advanced, we must use whatever seems best in each individual case. One principle is fixed, however, and that is that absolute asepsis must at all times prevail.

Undoubtedly, in the direct fixation of

recent fractures, we have a progressive step in surgery, and while with our present facilities and experience the work has marked limitations, as we grow in knowledge and skill we will find more and more cases adapted to such interference, and the number of those who will use it will rapidly increase.

SURGICAL SUGGESTIONS

Creeping infants may gather wood splinters or needles in their hands or knees and abscesses in these localities should suggest such an etiology.

When it causes suppuration, a foreign body is usually found; but if there be difficulty in locating it, it is better to be content with drainage for a few days rather than expose uninfected areas by a prolonged search.

A subcuticular whitlow is often the superficial expression of a deep infection. After removing the raised epidermis carefully inspect the tissue beneath for a small opening. If this is neglected the process may speedily advance to the tendon sheath.

Active hemorrhage from a gastric ulcer is rarely fatal; the weight of evidence indicates that it is better to operate after than during the bleeding. Active hemorrhage from a duodenal ulcer is often fatal; operate as soon as the diagnosis is made.

If the surgeon desires to discover carcinoma of the cervix in a curable stage women past middle life must be examined periodically, for to wait until symptoms appear is often to discover the disease too late.

When Kocher's method fails to reduce a recent dislocation of the shoulder, it is usually because the surgeon has proceeded too rapidly. Deliberately is the only way to work quickly.

Gastro-enterostomy should not be performed unless there is, or is deliberately made, an obstruction in the duodenum or at the pylorus. If these remain, or become patent, the food will not be diverted through the artificial channel.—American Journal of Surgery.

THE JOURNAL OF THE MEDICAL ASSOCIATION OF GEORGIA.

300-302-304 Harison Bldg.

SUBSCRIPTION

PRICE.....ONE DOLLAR PER YEAR

SINGLE COPIES of this calendar year, 15 cents; of the previous calendar year, also 15 cents; two years old, 20 cents; three years old, 25 cents; in other words, 5 cents additional is charged for each year preceding the last calendar year.

REMITTANCES should be made by check, draft, registered letter, money or express order. **Currency should not be sent unless the letter is registered.** Stamps in amounts under one dollar are acceptable.

CHANGE OF ADDRESS notice should give both the old and the new address, and state whether the change is **permanent or temporary.** The change notice must reach us **ten days** in advance of the date of the issue which is to be forwarded to the new address.

WARNING: Pay no money to an agent unless he presents a letter showing authority for making collection.

ADVERTISEMENTS.

Advertising forms go to press eight days in advance of the date of issue. In sending in copy time must be allowed for setting up advertisements and for sending proofs. No proprietary medicines can be advertised until approved by the Council. Advertising rates will be sent on request.

CONTRIBUTIONS.

EXCLUSIVE PUBLICATION: Articles are accepted for publication on condition that they are contributed solely to this journal.

CONTRIBUTIONS TYPEWRITTEN. Authors should have their contributions typewritten—**double-space and with ample margin**—before submitting them. The expense is small to the author—the satisfaction is great to the editor and printer. We can not promise to return unused manuscript, but try to do so in every instance. Manuscript should not be rolled or folded.

ILLUSTRATIONS: Half-tones and zinc etchings will be furnished by THE JOURNAL when satisfactory photographs or drawings are supplied by the author. Each illustration, table, etc., should bear the author's name on the back. Photographs should be clear and distinct; drawings should be made in black ink on white paper. While we cannot guarantee to return used photographs and drawings, we use our best endeavors to do so after the article is published, if the word "return" is written on the back of each.

ANONYMOUS CONTRIBUTIONS, whether for publications, for information, or in the way of criticism are consigned to the wastebasket unread.

NEWS: Our readers are requested to send us items of news of a medical nature, also **marked** copies of local newspapers containing matters of interest to physicians. We shall be glad to know the name of the sender in every instance.

MEDICAL ASSOCIATION OF GEORGIA

Stated Meeting Held April 17, 18 and 19, 1912

Medical Association of Georgia stated meeting held April 17, 18 and 19, 1912.

The President, Dr. W. L. Fitts, in the chair.

The Sixty-third Annual Session was held in Augusta, Ga., and was called to order by the President Wednesday morning at 10.30 o'clock.

Invocation by the Rev. Ashby Jones, of Augusta.

Address of Welcome on Behalf of the City

Hon. R. Roy Goodwin, Councilman of the City of Augusta, said he was asked to appear before them and extend an official welcome to Augusta. He regretted that the Hon. Thos. Barrett, Jr., Mayor of Augusta, was unable to be present and welcome them in person and extend to them the welcome to which they were entitled. He also regretted that the short notice given him to appear before them prevented him from preparing what was best in keeping with the hospitality which all wished to extend to this important Association which had done so much good throughout the State of Georgia. He also regretted that the municipal authorities had no jurisdiction over their work. He sincerely hoped that the few words of welcome he extended to them would overcome any depressing effects of the inclement weather without.

He said that when Dr. Murphey called at his office yesterday and said that he was expected to represent the Mayor at this meeting, he asked, "Where do I appear on the program." Dr. Murphey replied: "You follow the Rev. Ashby Jones." Mr. Goodwin then said: "Murphey, you give me a man's size job." Dr. Murphey replied: "You need not trouble yourself; Jones is going to talk about God Almighty, and you can talk about the doctors."

He was very glad that the City of Augusta was to entertain the delegation at this time. He did not believe there was any municipality in the South that recognized the medical profession of the State as had Augusta. When the city was a mere village and the medical school was in its long clothes of infancy, the municipal authorities came in close touch with the medical profession. Even in those days they gave directions that the physicians and surgeons should control the college funds for all time, and the wisdom of this seemed to have been demonstrated in the succeeding years. In less than one year we expect to build a new hospital which will give the medical college ample material to make itself one of the greatest colleges in the country between Baltimore and New Orleans. The city authorities believed in the medical profession and this was demonstrated when they put up money for the running of the college.

It gave him particular pleasure, representing the City of Augusta as he did, to welcome the members of the Medical

Association of Georgia to this city and he hoped that their stay would be both a pleasure and profitable. In behalf of the City of Augusta and of the Mayor he extended to each and every one a cordial welcome.

Address of Welcome on Behalf of the Local Profession

Dr. J. M. Hull, of Augusta, made this address as follows:

Recognizing, Mr. President, the sovereign right of this Association, whether exercised by this body, during its executive session through its elected officers, or it appointed committees, to command the services of its members after such fashion as seems best to them, I accepted without hesitation the notice served on me by your committee to deliver those assurances of welcome which custom says is proper for this happy occasion.

I know not where this custom originated, but I imagine it began at a time when great cities were fenced about with high walls and splendid battlements, and further patrolled both day and night by powerful sentries to keep out inhabitants of other cities. Therefore to give security to delegations which should come upon any mission, the town officials met the visitors at its gate, and after assuring them of a welcome, gave over the keys of the city to their chief, or spokesman, with the idea that, if their mission proved not acceptable, no bodily harm would befall them, and that at their pleasure they might leave in safety. Since those ancient days conditions and ideas have wonderfully changed, and while we still preserve some of those customs of an honored past, it is with an entirely different meaning that we enact them.

You have not, of your own volition come to us, nor do you bring any treaty, the acceptance of which would redound to your advantage, but you have come because our representatives at your last meeting plead so earnestly and so eloquently to you to be our guests on this occasion, that you had nothing else to do than to accept. So, as a consequence of that invitation and that urging, you are here.

These words of welcome were, therefore, worse than useless, did they not permit us the opportunity to express to you the great measure of joy in our hearts that you are

here. I cannot recall that on any former occasion, when I have remarked the gladness with which other cities have greeted you, that I have ever heard any one attempt to explain why your coming called forth, not only every member of your honorable body, but the officials and citizens of the town as well, and therefore shall allow myself the pleasure of telling you, that it is because your past history has been so honorable, and your past achievements so splendid, as to demand for you a universal welcome.

Of the individuals in your ranks, whose works have been so great as to have won lasting fame, I shall not talk, as I see from your program that well be better told you by my esteemed friend, Dr. Wright, whose knowledge and gifts pre-eminently fit him for this office. Of those magnificent accomplishments of your Association as a body, it needs only a few references to show how richly you deserve any welcome that any city can tender you. It is a glorious fact that there never has been a proposition looking to the betterment of the State's health, or other conditions, that your body has not been the first to adopt the suggestions, and work for its enforcement.

It was through your influence that the State Legislature enacted the bill creating the Board of Medical Examiners, whose work, so splendidly performed, has not only kept from your borders that army of quacks and fakers, which would otherwise so infest it, but has likewise been a marked incentive to every college in your State, in adopting and maintaining their present high standards. It was likewise your influence which secured the State Board of Health, and later so wonderfully enlarged its field and improved its operations.

The rapid development of the State Sanitarium has also been greatly aided by your Association, and it has grown in size, beauty and perfection of operation, until now it is an institution of which you are commendably proud. Judging you, then, by your past, what may we not expect of your future? Who knows in what year you may not again go before the Legislature, and showing them the exact etiology of pellagra, demand so careful an inspection of imported corn, that you will forever eradicate that distressing malady from the State? Who knows at what session of your Association you will demonstrate that, as grand and glorious as is the

work of your school, that they are positively pernicious in their acceptance of children who are too young, thereby retarding normal development so essential to future perfection, producing each year a larger and constantly growing numbers of defective eyes, and further laying the certain foundation for a large number of neurotics, especially among your girls.

Who knows how soon you, as a body, will begin to instret the State in its moral problems, and when you do begin, start with your schools, and demand the abolishment of the honor-giving system that has started the warping of hundreds of young souls and hearts.

Who knows how soon you will teach the unquestioned fact that the use of any but a very moderate amount of alcoholics is bad, and that to their extensive use, and particularly of the impure and adulterated brands, is due, in a large measure, the magnificence of our asylum at Milledgeville; and when you have truly inaugurated your plan of further education, will you not further increase the health and prevent the ravages of disease and the early harvest of death, by in some manner enforcing the proper physical exereises, coupled with proper manual duties, through proper hours for children, as is suited to their years.

Your achievements as a body in the past, and the charming personality of you as individuals, has already created a welcome for you wherever you have gone; but when we think what glory you may at any time bestow upon any city where you may be, when enacting any of the great events, that we can so easily imagine your doing, your members must understand how glad we, as medical men, are to have you with us.

As representing the local fraternity, I not only extend this, our welcome, but assure you that it is our hearty wish that you will come to us every year: and so earnest is that desire on our part, that we promise, if you will accept our invitation to hold your annual meetings here, we will give you the finest hall for your sessions, and offices for your officers, and ever and ever, the warmest welcome to our city and to our homes.

Response

Dr. W. F. Westmoreland, Atlanta, said that once before he recalled being asked to make a response to the address of wel-

come and a few weeks beforehand he wrote out what he thought to be an excellent response. When he got on the platform he could remember only one part of it. His mind seemed to be a blank. He still had his address in his pocket. A reporter from one of the papers asked him for his response to the address of welcome. He went upstairs, apparently to get his copy, which was in his pocket. He then returned and read it to him. The reporter asked: "Is that what you said this morning? It reads better than it sounds."

Since becoming a member of this Association Dr. Westmoreland had attended four meetings in Augusta on four different occasions, and anyone who attended these meetings need have no fear regarding the welcome they were sure to get. He supposed the doctors got welcomed several times a day. Pathos and suffering did not count, especially when one attended these meetings in Augusta. Augusta was the only place where he failed to get home right after the adjournment of the meeting; he usually got home five or six days after. And so they wanted the Association to meet every year in Augusta; he thought that often they came to Augusta when they were not wanted, and even the Augusta delegates discouraged them sometimes. However, they were the victims and must be prepared to make sacrifices. He recalled the story about the boy in Kentucky who was digging potatoes and a man passing by said to him: "Son, how much do you get for digging potatoes?" The boy replied: "I don't get nothing for digging them, but I'd get hell if I didn't."

Whatever he might say he wanted them to take it as coming from the heart and not from the head; much he had left unsaid in regard to the response of welcome must be taken for granted. When he went away from Augusta he always had that feeling that he wanted to go back because he had enjoyed himself so, not only because he was meeting friends and fellow practitioners, but because he felt that he was welcome and because in Augusta he could do what he wanted. The people here had showed a great deal of consideration for their welfare and he asked that when they went away they would remember what Lord Byron said:

"In the desert a fountain is springing,

In the wide waste there still is a tree,

A bird in the solitude is singing,

Which speaks to my spirit to thee."

Report of Entertainment Committee—
Dr. E. E. Murphey read this report.

Report of the House of Delegates—Dr.
W. C. Lyle read this report.

Address

Dr. Hugh H. Young, of Baltimore, Md., said that it was a great pleasure for him to be present and be among them because he had a great admiration for the medical men of Georgia. Many years ago he was on his summer vacation and was doing some experimental work with anaesthesia. He met a lady at San Antonio, Texas, and he told her of his work, which he thought was going to be a record-breaker. She said: "My father discovered anaesthesia." Dr. Young asked: "Who is he?" She replied: "Dr. Crawford W. Long, of Jefferson, Georgia." Dr. Young asked for proofs, which she got from her strong box upstairs. The very much discolored manuscript described with great accuracy the first operation as well as the ether frolic in Jackson County, and Dr. Young was struck with the very great importance of what he had learned from Miss Long. His first medical publication, presented at Johns Hopkins, pertained to this original manuscript of Dr. Crawford W. Long, and he believed that this was one of the greatest things he had ever done. This was the first time that the Yankees realized that such a man as Dr. Crawford W. Long ever existed. He thought it was an honor and joy in not giving credit for this discovery to the Boston dentist and to give it to the man to whom it really belonged, this man in Georgia. His paper was written in 1895 and published in 1896; since then England had officially recognized Dr. Crawford W. Long as the real discoverer of anaesthesia. Only a short time before England had hailed America as the real discoverer of anaesthesia.

Even before the war Georgia had taken the foremost place in medicine and particularly in surgery. Before the days of anaesthetics operations were performed under hypnotic influences.

Many of their best men at Johns Hopkins came from Georgia. When Dr. Boyd recently located in Atlanta, Dr. Young was robbed of a splendid helping hand.

Dr. Young said he was struck by the interest the medical men were showing in political affairs; this would make the legislators realize the importance of the medical work and make them listen to the

doctors. In Maryland the only way they could get the legislators to do anything, or to do what the doctors wanted, was to take the doctors to them and make them do it; by so doing you could get passed any law. Hold over their heads the threat that you would give them an overdose of calomel and then you can make them do as you wish. Dr. Young happened to be on the committee in Washington which was formed to aid in the passage of the Owen bill; this bill was apt to be passed by the Senate, when it would go to the House of Representatives. However, it was absolutely impossible to get a bill through that calls for a separate cabinet officer. The bill as framed called for an independent health service, independent of any department, planned something like the Smithsonian Institute and other organizations in Washington, executive in character, but not directly associated with any particular department. The feeling existed that such an independent body would shortly grow so important that it would demand a department by itself. Mr. Owen told Dr. Young that if the bill passed the Senate it would live only to die in the House of Representatives, and he urged him to get all the help that he could. He would like to find out what men at this meeting had any influence in Washington so that if it became urgent and necessary, an urgent call could be sent them. He asked the Secretary to send him the names of the men who would be willing to get in line. Although an outsider Dr. Young said he would like to suggest three things: First, public announcement of their belief in the Owen bill; second, that a copy of the bill be placed in the hands of the committee of which Mr. Adamson was chairman; also that they advocate an increase in the pay of those in the Marine Hospital Service, so that they pay would be on a par with the pay of those in the United States Army and United States Navy; third, that a Committee on Public Health and Hygiene be organized in the House of Representatives similar to what they had in the Senate. He suggested that a committee be appointed to draw up certain resolutions embodying the above and that they should be guided judiciously so as not to hurt the feeling of Judge Adamson. He thought that such an action would be very helpful. Above all, he asked that they get a list of the doctors who were willing to aid in having the

suggestion he made carried out, especially aiding in the passage of the Owen bill.

As President of the Maryland State Medical Association, Dr. Young said he took great pleasure in the honor they had given him.

Resolution—Dr. James E. Paullin, Atlanta, moved that Dr. Hugh H. Young, of Baltimore, be granted the privileges of the floor. This was seconded and carried.

Friday Afternoon—Election of Officers

TELLERS

Dr. M. A. Clark, of Macon.
Dr. J. L. Hiers, of Savannah.
Dr. E. C. Thrash, of Atlanta.

FOR PRESIDENT

Dr. W. W. Pilcher, of Warrenton.

FOR FIRST VICE-PRESIDENT

Dr. J. W. Palmer, of Ailey.

FOR SECOND VICE-PRESIDENT

Dr. T. H. Hall, of Macon.

DELEGATE TO THE AMERICAN MEDICAL ASSOCIATION

Dr. W. H. Doughty, of Augusta. (Held over).

ALTERNATE

Dr. E. G. Ballenger, of Atlanta. (Held over).

DELEGATE TO THE AMERICAN MEDICAL ASSOCIATION

Dr. T. J. Carlton, of Savannah.

ALTERNATE

Dr. T. R. Wright, of Augusta.

COUNCILORS FOR THREE YEARS

Dr. Gordon Chason, of Bainbridge, from Second. (Unexpired term).

Dr. J. N. Ellis, of Atlanta, from Fifth. (Unexpired term).

Dr. W. B. Hardman, of Commerce, from Ninth. (Term expires 1915).

Dr. W. J. Cranston, of Milledgeville, from Tenth. (Term expires 1915).

Dr. A. G. Little, of Valdosta, from Eleventh. (Term expires 1915).

Dr. E. T. Coleman, of Graymont, from Twelfth. (Term expires 1915).

It was moved, seconded and carried that the next place of meeting would be at Savannah.

Resolution—Dr. W. B. Hardman, of Commerce, offered the following resolution, which was seconded and unanimously carried:

Be it Resolved, That we extend to the City of Augusta, her municipal authorities, the medical profession as a whole and especially certain individuals of the Augusta medical profession, our most sincere and heartfelt thanks of this Association for the courteous treatment and unbounded hospitality that we have received.

Address of the In-Coming President

Dr. W. W. Pilcher, of Warrenton, said that this was the time that he wished he was a speaker and could give them a good address on this occasion, but, like Dr. Carlton, he felt too full for utterance. All that there was in him they could expect to have devoted to the interest of the Association for the next twelve months, and he would devote the best in him for the best interests of the Medical Association of Georgia and for the advancement of the medical profession throughout the State. He thanked the gentlemen for this signal honor in making him the head of the Medical Association of Georgia, with which it had been his pleasure to be so long identified, and he asked each and every member, and every county organization to heartily co-operate with the Councilors in the organization and in the perpetuation of the various county societies. He congratulated them upon selecting men of material at this meeting. Doctors, unlike lawyers, were prone to nurse their grievances; the legal profession went into court and fought bitterly one another. But after court had adjourned, they placed their arms around one another and forgot for the time being their differences. But not so with the doctors. In accepting the responsibility they sought fit to honor him, it was with a feeling of his unworthiness, although he felt that the work entailed would be a pleasure to him. He thanked them all from the bottom of his heart, and promised that he would give them the best that was in him for the next twelve months.

Presentation

Dr. W. W. Pilcher, of Warrenton, addressing the retiring president, Dr. W. L. Fitts, of Carrollton, said that in behalf of the members of the Medical Association of Georgia, who wished to show their great appreciation of his work during the past

twelve months, he offered him a slight tribute, this silver pitcher, and they all hoped that on the sea he embarked would never be ruffled with sorrow or discontent, and that he would never be unfortunate enough to strike an ice-berg.

Response

Dr. W. L. Fitts, of Carrollton, replied that he had nothing to say for himself. He had been coming to the Medical Association of Georgia meetings for many years; he never tried to talk, but he did work. He said he had never made a speech until this year. He said that he appreciates the gift very much. He would continue to come to the meetings and do what he could.

Meeting of the House of Delegates

Resolution by Dr. White:

To amend Sec. 3, Art. 9, so as to read: "The officers of this Association shall be elected after nomination by the House of Delegates at noon of the second day of the annual session."

Secretary's Report

Gentlemen:—I have the honor to herewith submit to you my second annual report.

Concerning the question of membership, I regret to state that there is each year a gradual diminution in numbers. To my mind this is due to the laxity of the work of the officers of the Association, and more especially due to lack of interest on the part of the secretaries of the County Societies. The work of the State Secretary's office has been more than double what it has ever been before. I have this year written letters to every member of last year who has not reported for 1912 and this work has brought valuable returns. Practically all the members of the Association drop their membership as a result of not having their attention called to the payment of dues, and the writing of a letter to such a member almost invariably brings a favorable response. Likewise, I have taken occasion to write to a number of physicians in counties where there is no organized society, and by so doing have had several societies organized.

In fact more societies have been organized directly from the Secretary's office than by all of the Council combined.

Only in exceptional cases have the Councilors been able to secure a sufficient number of members to pay the expense of organization, not considering the expense of furnishing to these members the Journal. There has been a woeful lack of interest on the part of most of the Councilors in supplying this office with a list of names of physicians in their district who are eligible for membership and who do not belong to their County Societies.

In my opinion no man should retain the office of Councilor unless he has such a list of names and writes a personal letter to each of them at least once a year. The function of a Councilor is to keep in touch with the physicians of his district and to supply the central office with such information concerning them as may be required. I regret to state that, generally speaking, the Councilors are more ignorant of the conditions of their local districts than the Secretary himself, who is quite a distance away from them.

I shall touch upon this matter again in my final suggestions.

Treasurer's Report

In consequence of the beginning of the publication of the Journal the expenses of the Association have materially increased this year. However, a considerable amount has been returned through the medium of the Journal and more will be forthcoming each year hereafter.

I submit herewith an itemized statement of the income and expenditures of the Association for the past year:

INCOME

Balance on hand from last year.....	\$1,151.05
Received from members.....	3,093.27
Received from Journal.....	596.75
Total	\$4,841.07

EXPENDITURES

1911		
April	21	T. J. McArthur, exp. \$ 100.00
	24	W. U. Tel. Co., messages, A. T. McCormick 1.10
May	1	W. W. Pileher, exp. 25.85
	6	Phoenix Ptg. Co., old account 20.70
	10	G. W. Tidwell, stamp and pad90
	15	Whitehead & Hoag, buttons 13.50

	18	R. C. Wallace, Pullman to A. M. A.....	17.00
	18	Postmaster, stamped envelopes	21.44
	22	E. Franklin Smith, reporter	175.00
	23	A. T. McCormick, exp	31.70
	31	L. H. Clinton, freight old transactions	3.30
June	2	W. R. Dawson, bond..	5.00
	2	J. P. Stevens Co., engraving for Dr. Davis	3.50
	5	Treas., stamps, \$5; telegrams, \$1.50	6.50
	7	Treas., shelving	8.23
	9	A. T. Calhoun, exp....	14.01
	9	Secretary, exp. to A. M. A.....	350.00
	19	Returned draft	24.00
July	16	Phoenix Ptg. Co.....	18.25
Aug.	8	Postmaster, postage on Journal	29.68
	31	Sou. Ex. Co., carriage Councilors' stationery	1.44
Sept.	14	J. P. Stevens Co., Pres. stationery	13.50
	27	Phoenix Ptg. Co., Journal lists	11.25
Oct.	11	Postage for Journal..	2.33
	14	Stamps	5.00
	30	Phoenix Ptg. Co.....	150.00
Nov.	4	Postage for Journal..	2.03
	29	Phoenix Ptg. Co.....	100.65
	29	W. C. L., overdraft..	50.00
Dec.	19	Exp. to Councilors' meeting	16.00
1912			
Jan.	12	Postage for Journal..	2.35
	30	Postage for Journal..	2.25
Feb.	2	Phoenix Ptg. Co.....	200.00
	7	R. F. Dressel, exp'ge	2.00
	7	Walker Ag'cy, blank book	1.50
	8	Postage and stamped envelopes	37.00
	12	W. U. Tel., day letters to Council.....	8.18
	13	Postage for Journal..	1.24
	26	Ga. Railroad, freight Addressograph	3.18
March	2	Postage for Journal..	2.37
	7	Postmaster, stamped envelopes	20.00
	10	Foot & Davies Co., old account	97.35
	14	Sou. Ex. Co., express on plates	1.00

	14	Phoenix Co., return post cards	9.00
	22	Extra post cards and printing	11.00
April	6	Addressing envelopes for Dr. Pilcher	1.25
	3	Phoenix Ptg. Co.....	405.35
	6	Postage and express on plates	13.50
	9	L. J. Henry, work for Dr. Pilcher	8.95
	9	J. P. Atkinson, Councilor's expense	27.45
	10	Phoenix Ptg. Co., mailing Journal programs	6.94
		W. C. Lyle, drawn on salary	1,750.00
		Total	\$3,852.72
		Income	\$4,841.07
		Expenses	3,852.72
		Balance	\$1,088.35

OUTSTANDING INDEBTEDNESS

Balance due on Journal.....	\$ 489.61
Balance due on Association printing	32.41
Addressograph	82.50
Balance due Secretary's salary....	50.00
Total	\$ 654.52

BILLS RECEIVABLE

Signed contracts for advertising..\$ 773.11
(Less commission).

Our balance on hand for this year is \$63.70 less than last year.

We, your committee appointed to audit the accounts and statement of your Secretary and Treasurer, report as follows:

We have checked over this statement and found it, in the main, correct. There were a few minor mistakes which were readily explained. These mistakes occurred on account of bereavement in Dr. Lyle's family, which necessitated him having to rely on others to tabulate the final report. We heartily commend the Secretary for his faithful work. His task has been stupendous.

We would recommend that in the future all accounts be paid by voucher checks, or bills accompany each check, as in checking this statement in some instances the paid check was our only voucher.

In the matter of the Secretary's expenses to the American Medical Association, the committee were unaware of the

action of the Association at Rome, in authorizing these expenses, and finding no record of same in the minutes, referred this item back to the Board of Councilors before approving it. We recommend that the authority for this expenditure be yet recorded.

Respectfully submitted,

W. B. HARDMAN, Chairman.

J. A. COMBS.

W. D. TRAVIS.

Journal

The cost of the publication of the Journal has been approximately \$135 per month.

The first issue was bound in ordinary paper covers, which so cheapened its appearance that there was a universal voice of protest from the members. This caused me to change the cover of the Journal, increasing the cost about \$10.00 per month.

The work of establishing a new medical journal is something stupendous and in consequence thereof extra help had to be employed and extra room secured for the filing of back numbers. This costs \$80.00 per month, or \$960.00 per year, which has been paid out of the salary of the Secretary-Treasurer, an excess of \$360.00 above the allowance for this purpose. The other costs of publishing the Journal have already been reduced below that of issuing the Annual Transactions, and if the Councilors and members of the Association will exert themselves, the Journal may be made self-supporting by the end of this year. To my mind this is quite a credit to the Association, in that no other State journal has become an asset within so short a time. I must again call your attention to the fact that the Councilors have not assisted me in securing advertisements for the Journal as anticipated. Only two Councilors of the entire Association have secured advertisements and in these instances only one each. This has been a distinct disappointment to me and is not in accord with the previous promises of the Councilors. If each Councilor would secure one page of advertising in his district, we would be able to more than pay for the Journal from them.

As you understand, only acceptable advertisements are published, and I have refused a sufficient number of these not accepted by the Council on Pharmacy, to make up our deficit for this year. The Councilors and officers of District Socie-

ties have neglected, with but few exceptions, the furnishing of news items from their districts. The county secretaries have likewise suffered from the same fault. The by-laws of the Association distinctly specify that reports of all meetings of District and County Societies shall be made to the Journal for publication, and all papers read at such meetings are property of the Association. This by-law has been violated in many instances, and particularly in the case of one society, the papers of which are never furnished the Association, but are read and furnished another Journal invariably. This matter demands the investigation of the Association, particularly as the Journal is of such a character that it must be considered not a credit to the profession of the State.

There has been considerable just complaint in that the members have not received their Journal regularly. This has been due to the fact that the addresses of members have not been fully given. In order to overcome this I have purchased an Addressograph, which is likewise a card index containing the names and full addresses of the members of the Association, and there can be no further complaint on this score. This machine will be used in addressing all correspondence to members hereafter, and will be quite a saving to the Association, practically paying for itself within one year by using it to address the Journals. It is my intention hereafter to mail all the Journals from my office instead of the printing establishment, as heretofore. While entailing considerable work the results will be eminently more satisfactory.

The entire cost of establishing, equipping and publishing the Journal has been \$1,339.61, an itemized statement of which is herewith appended.

SUGGESTIONS

I would urge that the Councilors have a list of every physician in their districts and communicate with those who are eligible for membership, giving the name and address of the secretary of the society wherein the physicians reside. My experience has taught me that ordinarily as much may be accomplished by a personal letter to every eligible man as by a visit where only a few of the men in a county may be seen. The Chairman of the Board of Councilors has adopted such plan during this

year, and the numerous responses received in my office indicate the success thereof.

I would further urge that the Secretaries of County Societies be more enthusiastic in their work, as upon them depend the life of the county societies, and through them the State Association.

In conclusion I desire to than all the officers of the Association for any assistance rendered, and especially the Chairman of the Board of Councilors, who has at all times willingly made any sacrifice at my request for the welfare of the Association. He has very frequently responded to my call by visiting me and aided me by his wisdom and encouraged me by his enthusiasm.

Respectfully submitted,

W. C. LYLE, Secretary.

MINUTES OF COUNCIL APRIL 17, 1912

Meeting called to order by Chairman Pilcher.

The Secretary-Treasurer made his annual report, which was referred to an auditing committee consisting of Drs. Hardman, Combs and Travis.

Dr. E. J. Spratling, medical director of the Empire Life Insurance Co., was accorded the privileges of the floor for the purpose of explaining a proposition of the Association of Life Insurance Companies, whereby a list of desirable members in each locality would be furnished the insurance companies and any company could use any one of these desirable members as an examiner. After a free discussion, the Council approved the proposition of the insurance companies, with the understanding that when possible only members of medical societies be selected and the fee for examinations should not be less than \$5.00.

Moved by Dr. Harvard that the Council recommend the payment of the expenses of the Secretary to the meeting of the Association of State Medical Secretaries. Carried.

Moved by Dr. Goss that honorary members of the Association who receive the Journal pay \$1.00 per year, if the county secretary where such member resides writes the State Secretary that such honorary member is engaged in the practice of medicine. Carried.

Upon motion the meeting adjourned.

MINUTES OF COUNCIL APRIL 19, 1912

Meeting called to order by Chairman Pilcher.

Moved by Dr. Hardman that a standing committee on organization be appointed, such committee to consist of one member from the Council and two members from the Association. Motion carried, and Dr. Hardman was appointed as a member from the Council.

A motion by Dr. Harvard that the Council appoint the Vice-Councilors was adopted.

At the 1911 meeting of the Association Dr. Hardman gave notice of a motion to amend the by-laws so as to permit of the election of Councilors who might not be present at the current meeting of the Association. Upon motion Council recommended such amendment.

Upon motion meeting adjourned.

MINUTES OF COUNCIL APRIL 19, 1912 (Second Meeting)

This meeting was called for the purpose of organizing the Council for the ensuing year. The following newly elected Councilors were installed: Dr. Gordon Chason, second district; Dr. J. N. Ellis, fifth district; Dr. W. J. Cranston, tenth district; Dr. A. G. Little, eleventh district; Dr. E. T. Coleman, twelfth district.

Dr. W. B. Hardman, of Commerce, was elected chairman of the Council, and Dr. J. Lawton Hiers, of Savannah, secretary.

Upon motion the meeting adjourned.

MINUTES OF HOUSE OF DELEGATES, APRIL 17, 1912

Meeting called to order by President Fitts.

Roll call and appointment of alternates.

Report of Committee on Arrangements was made by Chairman Murphey.

Report of Committee on Scientific Work was made by Chairman Clarke.

Upon motion these reports were adopted.

The report of the meeting of Council was read by the Secretary.

Dr. Boatright moved to amend the report so as to permit of the Journals being sent free to all honorary members. Motion carried.

The report of the Council as amended was adopted.

The report of the Secretary-Treasurer properly audited was adopted.

Moved by Dr. McArthur that the House of Delegates request the Council to investigate the advisability of appointing a State organizer. Carried.

Moved by Dr. Goss that vacancies be declared in the Council of members from the Second and Fifth Districts, in consequence of changes in these districts whereby the present Councilors are not residents. Motion carried.

Moved by Dr. Pilcher that the House of Delegates go on record as indorsing the Owen Bill and the personnel bill of the Marine Hospital Corps. Motion carried.

Upon motion the meeting adjourned.

MINUTES OF THE HOUSE OF DELEGATES, APRIL 19, 1912

Meeting called to order by President Fitts.

A communication from Congressman Howard, asking the endorsement of the Association of a bill carrying an appropriation from the National Government for the investigation and study of Pellagra, was referred to the Committee on Public Policy and Legislation with the endorsement of this body.

A bill by Mr. Ellis concerning State Hygiene and Quarantine was referred to the same committee with a like endorsement.

Moved by Dr. Pilcher that the actual expenses of Councilors be paid. Carried.

Moved by Dr. Chason that the Committee on Tuberculosis be discontinued, as it had accomplished its work in having the State establish a State Sanitarium for the treatment of tubercular patients. Carried.

Moved by Dr. Fitts that a committee on Medical Defense be appointed, to consist of two members of Council and three members from the General Body. Carried.

Upon motion the meeting adjourned.

All reports of House of Delegates passed upon by the Association at the afternoon session Friday, April 19, 1912.

A felon should be aborted by covering the end of the finger with cotton saturated with alcohol, and then excluding the air by drawing over all a rubber finger cot.

PROGRAM

April 16, 1912

Meeting of Council, 10.30 p. m. (Eastern time), at Albion Hotel.

Wednesday, April 17—Morning Session

Meeting called to order at 10.00 a. m. at Moose Club, by President W. L. Fitts, M.D., Carrollton.

Invocation—Rev. Ashby Jones, Augusta.

Address of Welcome on Behalf of City—

Hon. Thos. Barrett, Jr., Mayor of Augusta.

Address of Welcome on Behalf of Local Profession—J. M. Hull, M.D., Augusta.

Response—W. F. Westmoreland, M.D., Atlanta.

Report of House of Delegates.

1—"The Local Medical Society and Its Relation to Public Health." T. J. McArthur, M.D., Cordele.

2—"What the Profession of Georgia has done for Medicine." T. R. Wright, M.D., Augusta.

3—"The Results of Inspection and Examination of Twenty-two Thousand School Children for Diphtheria." Claude A. Smith, M.D., Atlanta.

4—"The Eugenical Conservation of Man." A. L. R. Avant, M.D., Savannah.

5—"A Clinic with Deaf-Mute Children." R. C. Woodard, M.D., Adel.

6—"Exhibition of X-ray Plates." John S. Derr, M.D., Atlanta.

Wednesday—Afternoon Session

7—"Case Histories in Neurology." Lewis M. Gaines, M.D., Atlanta.

8—"So-called Functional Neuroses—Factors Causative and Curative." Hansell Crenshaw, M.D., Atlanta.

9—"Cerebro-Spinal Meningitis." W. D. Travis, M.D., Covington.

10—"Acute Yellow Atrophy of the Liver, with Cases." T. P. Waring, M.D., Savannah.

11—"Tobacco versus Alcohol." J. G. Dean, M.D., Dawson.

12—"Remedial Suggestions—Tenable and Tentative." R. T. Dorsey, M.D., Atlanta.

13—"Flotsam and Jetsam from a Medical Standpoint." B. P. Oliveros, M.D., Savannah.

14—"Cholecystitis as a Complication of Pellagra." H. F. Harris, M.D., Atlanta.

15—"Psychoses Accompanying Pellagra." E. M. Green, M.D., Milledgeville.

16—"Experimental Pellagra." Geo. C. Mizell, M.D., Atlanta.

Wednesday—Night Session

- 17—"Salvarsan (606) in Syphilis." E. G. Ballenger, M.D., Atlanta.
- 18—"Additional Report on the Use of Salvarsan." W. L. Champion, M.D., Atlanta.
- 19—"Symptoms and Diagnosis of Kidney Diseases." M. L. Boyd, M.D., Atlanta.
- 20—"The Value of Ureteral Catheterization." W. F. Shallenberger, M.D., Atlanta.
- 21—"Two-step Method of Enucleation of the Prostate." A. L. Fowler, M.D., Atlanta.
- 22—"Treatment of Pulmonary Tuberculosis by Compression." S. T. Harris, M.D., Highlands.
- 23—"Treatment of Tuberculosis without the Use of Tuberculin." J. Monroe Anderson, M.D., Pinedale.
- 24—"The Home Treatment of Tuberculosis." W. B. Hardman, M.D., Commerce.
- 25—"The Present Status of Specifics in the Treatment of Tuberculosis." E. C. Thrash, M.D., Atlanta.

Thursday—Morning Session

Report of House of Delegates.

- 26—"Evolution in Aseptic Surgical Technique." W. F. Westmoreland, M.D., Atlanta.
- 27—"Report of Cases of Gas Bacillus Infection." C. W. Crane, M.D., Augusta.
- 28—"Various Operations for Hernia, with Report of Cases." L. C. Fischer, M.D., Atlanta.
- 29—"Strangulated Hernia, with Report of Resected Cases." W. W. Battey, Jr., M.D., Augusta.
- 30—"Ligation of Thyroid Vessels in Exophthalmic Goitre." W. S. Goldsmith, M.D., Atlanta.
- 31—"The Surgical Treatment of Goitre." E. G. Jones, M.D., Atlanta.
- 32—"Conservative Treatment of Gunshot Wounds of the Extremities." Chas. L. Ridley, M.D., Hillsboro.
- 33—"Contractions of the Psoas Parvus Muscle Simulating Appendicitis." G. R. White, M.D., Savannah.
- 34—"Synecioma Malignum, Surgical Treatment." Everard A. Wilcox, M.D., Augusta.
- 35—"The Operative Treatment of Recent Fractures." Frank K. Boland, M.D., Atlanta.
- 36—"The Acute Surgical Abdomen." Floyd W. McRae, M.D., Atlanta.

- 37—"Intestinal Obstruction, with Report of Experimental Work." J. L. Campbell, M.D., Atlanta.

Thursday—Afternoon Session

- 38—"Management of Broken Compensation in Cardiac Disorders." E. E. Murphy, M.D., Augusta.
- 39—"Injurious Effects of Iodides and Bromides on Acute Inflammations, especially Cystitis." E. Bates Block, M.D., Atlanta.
- 40—"Typhoid Vaccine." J. W. Palmer, M.D., Ailey.
- 41—"The Rational of Vaccine Therapy." J. E. Paullin, M.D., Atlanta.
- 42—"Treatment of Typhoid Fever." S. T. R. Revell, M.D., Louisville.
- 43—"An Unusual Case of Typhoid Fever." J. E. Summerfield, M.D., Atlanta.
- 44—"Clinical Typhoid Fever." W. W. Jarrell, M.D., Thomasville.
- 45—"A Protest Against Unwarranted Reliance Upon Laboratory Findings versus Clinical Evidence in the Diagnosis and Treatment of Disease." Jas. B. Baird, M.D., Atlanta.
- 46—"Intestinal Sand; Report of Cases in Infants." N. M. Moore, M.D., Augusta.
- 47—"Clinical Manifestations of Uraemia from a Diagnostic View Point." Ralston Lattimore, M.D., Savannah.
- 48—"Menstruation Normal and Abnormal." J. R. B. Branch, M.D., Macon.
- 49—"Parsimony in Nutrition." Geo. M. Niles, M.D., Atlanta.
- 50—"Amoebic Dysentery, with Report of Cases." J. M. Sigman, M.D., Savannah.
- 51—"My Observations and Personal Experience on the Improved Technique of Ether Vapor and the Nitrous Oxide-Oxygen Anesthetics." T. J. Collier, M.D., Atlanta.
- 52—"Anesthetic Technique." Chas. Usher, M.D., Savannah.

Friday-Morning Session

Report of House of Delegates.

- 53—"The Importance of the Ophthalmoscope in Albuminuric Retinitis of Pregnancy." Dunbar Roy, M.D., Atlanta.
- 54—"Curettage of the Pharynx in Adults." M. M. Stapler, M.D., Macon.
- 55—"Extirpation of the Lacrymal Sac in Chronic Daercyocystitis." F. P. Cahoun, M.D., Atlanta.
- 56—"Malignant Growths of the Pharynx." J. M. Hull, M.D., Augusta.

- 57—"Some Unusual Cases of Nystagmus." A. W. Stirling, M.D., Atlanta.
- 58—"Follicular Conjunctivitis: Its Relation to Adenoids." T. E. Oertel, M.D., Augusta.
- 59—"Nose and Throat Reflexes Causing Cough." R. R. Daly, M.D., Atlanta.
- 60—"Induction of Labor in Puerperal Eclampsia." T. J. Carswell, M.D., Waycross.
- 61—"Twin Pregnancy in a Double Uterus." J. G. Earnest, M.D., Atlanta.
- 62—"Common Errors in Obstetric Practice." A. J. Kilpatrick, M.D., Augusta.
- 63—"The Interpretation of Surgical Pathology in Upper Right Quadrant." Willis Jones, M.D., Atlanta.
- 64—"Report of Abdominal Surgical Cases." G. A. Wilcox, M.D., Augusta.
- 65—"Drainage Sequent to Certain Surgical Procedures." Jas. N. Ellis, M.D., Atlanta.

Friday—Afternoon Session

Report of House of Delegates.

Election of Officers at 3.00 p. m. Friday

- 66—"Cancer Uteri, Return, Teratment, Cure." E. C. Cartledge, M.D., Atlanta.
- 67—"Oral Surgery." Robin Adair, M.D., Atlanta.
- 68—"Clinical Phases of Arteriosclerosis." Thos. D. Coleman, M.D., Augusta.
- 69—"Can We Prevent the Bottle-fed Baby." S. A. Visanska, M.D., Atlanta.
- 70—"Free Dispensary Work." A. G. Fort, M.D., State Board of Health.
- 71—"The Diagnosis of Positions of the Stomach and Colon by Means of the Roentgen Ray." C. R. Andrews, M.D., Atlanta.
- 72—"A Resume of the Work of Battle Hill Sanitarium for Tuberculosis of Atlanta." S. Wickes Merritt, M.D., Atlanta.
- 73—"Ulceration of Trigone and Vesical Neck a Sequel of Specific Urethritis." J. L. Farmer, M.D., Savannah.
- 74—"Mental Diseases, Diagnosis and Prognosis." J. W. Mobley, M.D., Milledgeville.
- 75—"Radical Surgery in Cases of Cancer-Oris, with Report of Case." B. S. Moore, M.D., Atlanta.
- 76—"The Medical Library and the Medical Society." V. H. Bassett, M.D., Savannah.
- 77—"A Hernia Case of Historic Interest." H. M. Michel, M.D., Augusta.
- 78—"Finkelstein Milk—Advantages and

Disadvantages in Infant Feeding." W. A. Mulherin, M.D., Augusta.

COLLABORATORS

The Council has decided to have certain members of the Association act as collaborators in various departments of the Journal. As far as possible those members have been selected who have shown a willingness to assist in the editorial work of the Journal, and we feel that it will be greatly improved by their assistance. Original articles, excerpts, translations and clippings from the exchanges will be furnished by these collaborators. One local member has been placed on each department staff and the editor will depend upon him to arrange for publication all matter in his department.

A HOSPITAL FOR NERVOUS DISEASES

The staff of the newly organized Hospital for Nervous Diseases in Atlanta, is composed of the following well-known physicians: Dr. Hansell Crenshaw, Medical Director; Dr. C. W. Strickler, Internal Medicine; Dr. F. K. Boland, Surgery; Dr. J. E. Paullin, Pathology; Dr. G. M. Niles, Gastro-enterology; Drs. Campbell and Ridley, Laryngology and Rhinology; Dr. Park Howell, Ophthalmology; Dr. Bernard Wolff, Dermatology; Dr. Edgar Ballenger, Andrology; Dr. C. R. Andrews, Orthopedics; Dr. W. F. Shallenberger and Dr. Annie L. Sawyer, Gynecology.

AMERICAN MEDICAL ASSOCIATION

The annual meeting of this great association this year will be held at Atlantic City, June 4-7. Dr. John B. Murphy, of Chicago, the president, and Dr. Abraham Jacobi, the president-elect, will preside and their addresses will doubtless be of a high order of excellence. Beyond this we have received no definite information yet concerning the program. From present indication the meeting will be very largely attended and many prominent physicians of this and other countries will present papers of decided scientific character and practical value.

The physicians of Atlantic City—as is

their custom—are doing everything they can to maintain New Jersey's reputation for generous hospitality and for the care and comfort of visiting physicians and their families.

NEED OF CARE IN PREPARING SCIENTIFIC PAPERS

We call attention to the following suggestions in an editorial taken from the Texas State Journal of Medicine, which we commend to the careful consideration of authors who prepare papers for our State and County Medical Societies, intended for publication in this or other medical journals:

"In preparing papers authors should remember that they have to be published, and that some one will have to get them ready for the printer. It is required that all papers be typewritten, and there should be ample space between the lines and on the margin for the necessary notations incident to the process of editing. There is also a vast difference between typewriters (operators), and authors should be sure that the typewritten copy is correctly phrased and that the spelling and punctuation are correct. It is amazing to contemplate some of the papers offered for publication, and should a single number of the Journal be published with unedited papers our readers would be astonished beyond measure. Carelessness more than ignorance is responsible for such a situation, and we, therefore, urge more care."

Our readers have little conception of the importance of the above suggestions, and of the amount of work and anxiety—to do justice to the authors—that careless preparation

of papers puts upon the editor, especially when such papers are handwritten, or even typewritten, with interlineations that are not legibly made. But it is not entirely or mainly a question of unnecessary work for the editor, for it does the author injustice frequently and it also involves needless expense to the society, when proof is sent to the authors who make corrections which require re-setting of entire paragraphs, sometimes lengthy ones. Interlineations should be very distinctly written, especially such as give technical terms or foreign authors' names. All papers should be typewritten unless the chirographer makes his manuscript so clear and distinct that mistakes shall not occur except by the typesetter's and editor's negligence.

These suggestions refer not only to scientific papers, but to all matter sent for publication in the Journal.

TO COUNTY TREASURERS

Make every effort to collect the annual assessment from the members and send check therefor according to the requirements of the by-laws.

The individual members can aid the treasurers by promptly remitting their dues. Failure to do this diminishes the basis of representation of their county society, may lose them a place in the regular printed list and deprive them of the monthly Journal.

When there is disagreement between the pulse and temperature, the pulse must be regarded as of the greater importance.

THE HOSPITAL FOR NERVOUS DISEASES

ATLANTA, GEORGIA

Overlooking Grant Park (200 acres wooded land, lake, etc.). Modern Sanitarium Building and Equipment. Staff of Twelve Consulting Physicians. Ideal place for Nervous Invalids of any sort. Send us your troublesome Chronic Cases.

Address

HANSELL CRENSHAW, M.D., Medical Director.

497 Cherokee Avenue, Atlanta, Ga.

LIST OF NATIONAL MEDICAL SOCIETIES

This information is correct to date of going to press, so far as we have been able to obtain it from the various secretaries. Officers or others are requested to notify us of any errors or required changes. For further information concerning any society address the secretary.

SOCIETY	PRESIDENT	SECRETARY	NEXT ANNUAL MEETING
AMERICAN MEDICAL ASSOCIATION..... American	John B. Murphy, Chicago.	Alexander R. Craig, 535 Dearborn ave., Chicago	Atlantic City, June 4-7, 1912.
Academy of Medicine.....	Alexander R. Craig, Chicago	Charles McIntire, Easton, Pa.	Atlantic City, June, 1912.
Academy of Ophthal. and Oto-Laryng.....	George F. Suker, Chicago	Lee M. Francis, 575 Delaware ave., Buffalo	Niagara Falls, Aug. 20-22, 1912.
Association of Anatomists.....	Ross G. Harrison, New Haven, Conn.	G. Carl Huber, Ann Arbor, Mich.	December, 1912.
Association of Genito-Urinary Surgeons.....	Edward Martin, Philadelphia	J. Bentley Squier, 49 E. 49th st., New York	Philadelphia, June 7-8, 1912.
Association of Obstetricians and Gyn.....	Xavier O. Werder, Pittsburgh	E. G. Grinkle, Cincinnati	Toledo, September, 1912.
Assn. of Pathologists and Bacteriologists.....	R. M. Pearce, Philadelphia	H. C. Ernst, Harvard Med. School, Boston	Philadelphia, April 5-6, 1912.
Association of Railway Surgeons.....	Rhett Goode, Mobile, Ala.	Louis J. Mitchell, 132 N. Wabash ave., Chicago	Chicago, Oct. 16-18, 1912.
Climatological Association.....	A. D. Blackader, Montreal	Guy Hinsdale, Hot Springs, Va.	Hartford, Conn., June 10-12, 1912.
Dermatological Association.....	Grover W. Wende, Buffalo	James M. F. Winfield, 47 Halsey st., Brooklyn	St. Louis, May 23-25, 1912.
Electro-Therapeutic Association.....	William D. McPee, Haverhill, Mass.	J. W. Travell, 27 E. 11th st., New York	Baltimore, September, 1912.
Gastro-Enterological Association.....	W. B. Cannon, Boston	F. W. White, 416 Marlborough st., Boston	Atlantic City, June 3-4, 1912.
Gynecological Society.....	Howard A. Kelly, Baltimore	LeRoy Brown, 148 W. 77th st., New York	Baltimore, May 28-30, 1912.
Laryngological Association.....	James E. Newcomb, New York	Harmon Smith, 44 W. 49th st., New York	Atlantic City, May 9-11, 1912.
Larynx, Rhin. and Otol. Society.....	Hubert Work, Philadelphia	Thos. J. Harris, 117 E. 40th st., New York	June, 1912.
Medico-Psychological Association.....	William N. Bullard, Boston	Charles G. Wagner, Binghamton, N. Y.	Atlantic City, N. J., May 28-31, 1912.
Neurological Association.....	Edward Jackson, Denver	Alfred R. Allen, 2013 Spruce st., Philadelphia	Boston, Mass., May 30-June 1.
Ophthalmological Society.....	Virgil P. Gibney, New York City	W. M. Sweet, 1205 Spruce st., Philadelphia	Atlantic City, June 12-13, 1912.
Orthopedic Association.....	Edw. B. Dench, New York	R. R. Fitch, 209 East ave., Rochester, N. Y.	Atlantic City, May 30-June 1.
Otological Society.....	Augustus Galle, New York	James F. McKernon, 62 W. 52d st., New York	Atlantic City, June 10-11.
Physicians, Association of.....	J. George Adam, Montreal	S. S. Adams, 1 Dupont Circle, Washington, D. C.	Hot Springs, Va., May 29-31, 1912.
Physiological Society.....	S. J. Meltzer, New York	Geo. M. Kober, 1819 Q st., Washington, D. C.	Atlantic City, May 7-8, 1912.
Proctologic Society.....	John L. Jekls, Memphis, Tenn.	A. J. Carlson, University of Chicago, Chicago	Cleveland, O., Dec. 26-28, 1912.
Public Health Association.....	John N. Hurty, Indianapolis, Ind.	L. H. Adler, Jr., 1610 Arch st., Philadelphia	Atlantic City, June 4-5, 1912.
Röntgen Ray Society.....	Frederick H. Baetjer, Baltimore, Md.	W. C. Woodward, 1766 Lanier pl., Washington, D. C.	Washington, September, 1912.
Society of Tropical Medicine.....	Jos. H. White, U. S. P. H. & M. H. S.	Henry K. Pancoast, 4238 Pine st., Philadelphia	Niagara Falls, N. Y., Sept., 1912.
Surgical Association.....	Arpad G. Gerster, New York	John M. Swan, 457 Park ave., Rochester, N. Y.	Atlantic City, June 3, 1912.
Therapeutic Society.....	Alex. D. Blackader, Montreal, Que.	Robt. G. LeComte, 1530 Locust st., Philadelphia	Montreal, May 29-31, 1912.
Urological Association.....	L. E. Schmidt, Chicago	N. P. Barnes, 212 Maryland ave., Washington, D. C.	Montreal, May 31-June 1, 1912.
Assn. of Military Surgeons of the U. S.....	C. P. Wertenbaker, U.S.P.H. & M.H.S.	H. A. Fowler, Teh Cumberland, Washington, D. C.	New York City, April 2-4, 1912.
Congress Am. Phys. and Surges.....	Wm. C. Gorgas, Ancon, C. Z.	C. Lynch, 716 Union Trust Bldg., Washington, D. C.	Baltimore, 1912.
Conference of State and Prov. Bds. of N.A.....	W. C. Woodward, Washington, D. C.	W. R. Steiner, 4 Trinity st., Hartford, Conn.	Washington, D. C., May, 1913.
Med. Association of the Southwest.....	A. L. Blesh, Oklahoma City, Okla.	H. M. Bracken, Capitol Bldg., St. Paul, Minn.	Washington, D. C., Sept. 20-21, 1912.
Mississippi Valley Medical Association.....	Louis Frank, Louisville, Ky.	Fred H. Clark, El Reno, Oklahoma	Hot Springs, Ark., Oct. 8-10, 1912.
Missouri Valley Medical Society of the.....	John M. Bell, St. Joseph, Mo.	Henry E. Tuley, 111 W. Ky. st., Louisville, Ky.	
Nat. Assn. for Study and Prev. of Thuber.....	Mazyek P. Eavenel, Madison, Wis.	Chas. Wood Fassett, St. Joseph, Mo.	
Nat. Assn. for Study of Epilepsy.....	William T. Shanahan, Sonyea, N. Y.	H. B. Jacobs, 11 Mt. Vernon pl., Baltimore	
Southern Medical Association.....	Jas. M. Jackson, Jr., Miami, Fla.	J. F. Munson, Sonyea, N. Y.	May, 1912.
Southern Surgical and Gyn. Association.....	J. M. T. Finney, Baltimore	Seale Harris, Mobile, Ala.	Vineland, N. J., June 3, 1912.
Western Surgical and Gyn. Association.....	L. L. McArthur, Chicago	W. D. Haggard, Jr., 148 8th Ave. N., Nashville	Jacksonville, Fla., 1912.
		Arthur T. Mann., Donaldson Bldg., Minneapolis.....	Old Point Comfort, Va., 1912.
			Cincinnati, 1912.
			Coffax Springs, Ia., March 21-22, '12.

LIST OF STATE MEDICAL SOCIETIES

This information is correct to date of going to press, so far as we have been able to obtain it from the various secretaries. Officers or others are requested to notify us of any errors or required changes. For further information concerning any society address the secretary.

SOCIETY	PRESIDENT	SECRETARY	NEXT ANNUAL MEETING
Alabama, Medical Assn. of the State of.....	L. Coleman Morris, Birmingham.....	J. N. Baker, 602 So. Perry st., Montgomery.....	Birmingham, April 16, 1912.
Arizona Medical Association.....	Francis E. Shine, Bisbee.....	John W. Flinn, Prescott.....	Bisbee, May 7, 1912.
Arkansas Medical Society.....	Morgan Smith, Little Rock.....	C. P. Meriwether, 309 S. Tr. Bldg., Little Rock.....	Hot Springs, May 13-16, 1912.
California, Medical Soc. of the State of.....	Thos. W. Huntington, San Francisco.....	Philip M. Jones, Butler Bldg., San Francisco.....	Del Monte, April 16-18, 1912.
Colorado State Medical Society.....	Walter A. Jayne, Denver.....	Melville Black, Metropolitan Bldg., Denver.....	Pueblo, Sept. 24-26, 1912.
Connecticut State Medical Society.....	John G. Stanton, New London.....	Walter R. Steiner, 4 Trinity st., Hartford.....	New Haven, May 22, 1912.
Delaware State Medical Society.....	Frank L. Springer, Newport.....	J. W. K. Forrest, 901 Jackson st., Wilmington.....	Wilmington, Oct. 8, 1912.
District of Columbia, Medical Society of.....	John B. Nichols, R. I. ave., Washington.....	H. C. Macatee, 2465 18th st., N. W., Washington.....	Tampa, May 9, 1912.
Florida, Medical Association.....	Albert H. Freeman, Starke.....	J. M. Fernandez, Jacksonville.....	Augusta, April 17-19, 1912.
Georgia, Medical Association of.....	William L. Fitts, Carrollton.....	Wm. C. Lyle, Augusta.....	Portland, Ore., 1912.
Hawaiian Territorial Medical Society.....	W. G. Rogers, Honolulu.....	Ed. E. Masey, Boise.....	Springfield, May 21-23, 1912.
Iaho State Medical Association.....	William F. Howard, Paopale.....	Edmund W. Weis, Ottawa.....	Indianapolis, Sept. 26-27, 1912.
Illinois State Medical Society.....	W. K. Newcomb, Champaign.....	Chas. N. Combs, Terre Haute.....	Burlington, May 8-10, 1912.
Iowa State Medical Association.....	William F. Howat, Hammond.....	V. L. Reynor, Council Bluffs.....	May, 1912.
Isthmian Canal Zone, Med. Assn. of.....	L. W. Liffitz, Hampton.....	D. F. Reeder, Ancon.....	Louisville, Oct. 12, 1912.
Kansas Medical Society.....	Lloyd Noland, Cristobal.....	Chas. S. Huffman, Columbus.....	New Orleans, April 23-25, 1912.
Kentucky State Medical Association.....	John T. Axtell, Newton.....	Arthur T. McCormack, Bowling Green.....	June, 1912.
Louisiana State Medical Society.....	I. G. Carpenter, Stanford.....	Joseph D. Martin, 141 Elk pl., New Orleans.....	April, 1912.
Maine Medical Association.....	Richard O. Simmons, Alexandria.....	W. Ben Moulton, 622 Congress st., Portland.....	Boston, June 11-12, 1912.
Maryland, Medical and Chir. Faculty of.....	Stanley P. Warren, Portland.....	John Leunruh, 1211 Cathedral st., Baltimore.....	Duluth, 1912.
Massachusetts Medical Society.....	Hugh H. Young, Baltimore.....	Walter L. Burrage, 24 W. Main st., Battle Creek.....	Muskegon, June, 1912.
Michigan State Medical Society.....	Geo. B. Shattuck, Boston.....	Wilfrid Haughey, 282 W. Main st., Battle Creek.....	Jackson, April 9-11, 1912.
Minnesota State Medical Association.....	D. Emmett Welsh, Grand Rapids.....	Thos. McDavitt, 210 Lowry Bldg., St. Paul.....	Sedalia, Moq, 1912.
Mississippi State Medical Association.....	Halder Sveve, St. Paul.....	E. F. Howard, First Nat. Bank Bldg., Vicksburg.....	Helena, May 8, 1912.
Missouri State Medical Association.....	Daniel J. Williams, Ellisville.....	F. J. Goodwin, 3525 Pine st., St. Louis.....	Lincoln, May 7-9, 1912.
Montana State Medical Association.....	Robert H. Goodier, Stoutsville.....	Herbert D. Kistler, Murray Hospital, Butte.....	Reno, Sept. 10-12, 1912.
Nebraska State Medical Association.....	T. C. Witherspoon, Butte.....	Jos. M. Alkin, 466-468 Brandeis Block, Omaha.....	Concord, May 8-9, 1912.
Nevada State Medical Association.....	Andrew D. Nesbit, Tekamah.....	Martin A. Robinson, Reno.....	Spring Lake, June, 1912.
New Hampshire Medical Society.....	B. F. Cunningham, Reno.....	D. E. Sullivan, 7 No. State st., Concord.....	Roswell, 1912.
New Jersey Medical Society.....	Geo. W. McGregor, Littleton.....	W. J. Chandler, 65 So. Orange ave., So. Orange.....	Albany, April 16-18, 1912.
New Mexico Medical Society.....	Daniel Strook, Camden.....	R. E. McBride, Las Cruces.....	June, 1912.
New York, Med. Soc. of the State of.....	Robert L. Bradley, Roswell.....	Wisner R. Townsend, 17 West 43d st., New York.....	Valley City, May 8-9, 1912.
North Carolina Med. Soc. of the State of.....	Wendell C. Phillips, New York City.....	J. J. Rowe, Casselton.....	Dayton, May 7-9, 1912.
North Dakota State Medical Association.....	Alfred A. Kent, Lenoir.....	David A. Stanton, High Point.....	Shawnee, 1912.
Ohio State Medical Association.....	Clinton E. Spicer, Litchville.....	J. H. J. Upham, 186 E. State st., Columbus.....	Scranton, 1912.
Oklahoma State Medical Association.....	Charles L. Reeder, Tulsa.....	Clairde A. Thompson, Muskogee.....	Manila.
Oregon State Medical Association.....	E. A. Sommer, Portland.....	W. B. Marcellus, 901-3 Selling Bldg., Portland.....	Columbia, April 16-18, 1912.
Philippine Islands Medical Association.....	James Tyson, Philadelphia.....	Cyrus Lee Stevens, Athens.....	Michell, 1912.
Rhode Island Medical Society.....	R. E. L. Newbern, Manila.....	V. L. Andrews, Manila.....	Chattanooga, April 9-11, 1912.
South Carolina Medical Association.....	Frederick T. Rogers, Providence.....	S. A. Welch, 253 Washington st., Providence.....	Waco, 1912.
South Dakota State Medical Association.....	J. Wilkinson, Jersey, Greenville.....	Edgar A. Hines, Seneca.....	Orden, 1912.
Tennessee State Medical Association.....	William G. Smith, Sidney.....	R. D. Alway, 212 Main st., Aberdeen.....	Norfolk, Oct. 22-25, 1912.
Texas, State Medical Association of.....	C. J. Broyles, Johnson City.....	Perry Bromberg, Nashville, 315 Jackson Bldg.....	Tacoma, 1912.
Texas, State Medical Association.....	Jos. S. McCracken, Mineral Wells.....	H. Taylor, W. National Bank Bldg., Fort Worth.....	Webster Springs, July, 1912.
Vermont State Medical Society.....	Robert W. Fisher, Salt Lake City.....	W. Brown Ewing, Salt Lake City.....	Wausau, May 22-24, 1912.
Virginia, Medical Society of.....	F. T. Kiddier, Woodstock.....	C. H. Beecher, Burlington.....	
Washington State Medical Association.....	Hugh M. Taylor, Richmond.....	Paulus A. Irving, Farmville.....	
West Virginia State Medical Association.....	Leon L. Love, Tacoma.....	A. H. Thomsn, Seattle.....	
Wisconsin, State Medical Society of.....	C. O. Henry, Fairmont.....	A. P. Bunt, Davis.....	
Wyoming State Medical Society.....	J. M. Dodd, Ashland.....	Charles S. Sheldon, 251 Langdon st., Madison.....	
	A. C. Hamilton, Thermopolis.....	W. H. Roberts, Sheridan.....	

"TIMETEST" makes your TIRE TROUBLE-PROOF

NO RIMCUTS

SAVES TIME

NO BLOW-OUTS

SAVES TEMPER

NO LEAKY VALVES

SAVES MONEY

PUNCTURES DO NO HARM

MORE COMFORT AND LESS EXPENSE

You are CERTAIN to get to destination

Puncture-Proof Tire Company of Atlanta

45 EDGEWOOD AVENUE

Phone Ivy 592

SEVEN PER CENT.

I can furnish Preferred stocks, absolutely safe from every standpoint, to yield, approximately, seven per cent.

Stocks and Bonds of every kind bought and sold.

JOHN W. DICKEY,
Augusta, Georgia

The Peoples Choice

Three Feathers and Upper Ten

JACK CRANSTON,

Southern Representative,

Augusta, Georgia

T. G. HOWARD, Druggist

BROAD AND JACKSON STS.

AUGUSTA, GEORGIA

SICK ROOM SUPPLIES. ALL NEWEST PREPARATIONS

Our Prescription Department is stocked with Standard Pharmaceuticals and Chemicals. We employ registered Pharmacists only. Out of town Physicians are invited to send us their prescriptions by mail.

RATES FOR REPRINTS

100.....	\$1.00 per page
200.....	1.25 per page
500.....	1.50 per page
1000.....	2.00 per page

Covers to count as four pages when ordered.

The Journal is owned and published by the Association, and all profit goes to make it better. Each member of the Association is financially interested in the Journal to the same extent as every other member, and each member is rightfully anxious for the financial success of the publication.

The greater this financial success, the greater the practical value can be made to the individual member, and hence the greater the value as an advertising medium.

Our advertisers, by their patronage, help to support the Journal, and make its successful publication possible. In return they expect, and rightfully, a fair return for their money. Every dollar spent by a member of the Medical Association of Georgia with advertisers in our Journal, in preference to non-advertisers, is a dollar spent in advancing his own personal advantage, for he has contributed something indirectly to the betterment of his own property.

The Journal cannot exist without the advertisers and their good will.

The advertisers cannot continue in business without the patronage of the medical profession.

The medical man cannot continue in business without the supplies for sale by the Advertisers.

The interests of all are identical—the profession must depend upon the manufacturers, etc. The manufacturers, drug houses, etc, must depend upon the more progressive and more successful physicians. The interests of both are best served through the official Medical Journal—the Journal published by the profession in its own best interests, scientifically and ethically.

ADVERTISING RATES

1	Page	1 year.....	\$150.00
1	"	1 "	87.50
1	"	1 "	50.00
1	"	1 "	33.00
1	"	1 "	25.00
1	Page	6 months.....	87.50
1	"	6 "	50.00
1	"	6 "	33.00
1	"	6 "	25.00
1	"	6 "	20.00
1	Page	3 Months.....	50.00
1	"	3 "	33.00
1	"	3 "	15.00
1	"	3 "	10.00
1	Page	1 month.....	25.00
1	"	1 "	15.00
1	"	1 "	10.00
1	"	1 "	7.50

These rates do not apply to cover pages, space next to reading matter, or matter requiring to be reset.

Send for This Book.



This is one of the most important pieces of printed literature that we have issued in years. It is a concise review of the essential facts relating to bacterial-vaccine therapy, embodying precisely what the seeker after this kind of information wants. It is not padded with clinical reports—in fact, it contains none. In addition to forty-eight pages of text matter, the book has thirteen full-page engravings in colors. It is now in its third edition.

Ask for the "new booklet on bacterial vaccines." A postal-card request will bring it promptly

Home Offices and Laboratories,
Detroit, Michigan.

Parke, Davis & Co.

DIRECTORY NUMBER

The Journal of the Medical Association of Georgia



Published Monthly under Direction of the Council

Editorial and Business Office—300, 302 and 304 Harison Building.

Subscription Price, \$1.00

Entered as second-class matter, August 4, 1911, at the Post Office at Augusta, Ga., under the Act of March 3, 1879.

Vol. II

AUGUSTA, GA., JUNE, 1912

No. 2

CONTENTS AND DIGEST.

ORIGINAL ARTICLES

The Medical Society and Its Relation to Public Health. By Thos. J. McArthur, M.D., Cordele.....	35
Discussion on Dr. McArthur's Paper.....	37
The Eugenical Conservation of Man. By Dr. A. S. R. Avant, Savannah.....	38
Discussion on Dr. Avant's Paper.....	42
Cerebro-Spinal Meningitis. By W. D. Tavis, M.D., Covington	43
Discussion on Dr. Tavis' Paper.....	45
A Clinic with Deaf-Mute Children. By R. C. Woodard, M.D., Adel.....	46
Discussion on Dr. Woodard's Paper.....	47
Resolutions	48

SELECTED ARTICLES

Newspapers	50
Editorials	50-51
List of Members.....	52

UNIVERSITY OF GEORGIA

COLLEGE OF MEDICINE

Augusta, Ga.

W. H. DOUGHTY, Jr., M.D., Dean.

W. C. LYLE, M.D., Vice-Dean.

L. W. FARGO, M.D., Registrar.

The 81st Annual Session of this College begins September 16, 1912.

Four years graded course of eight months each.

Didactic and recitation system of instruction.

Full time teachers in primary branches.

Well equipped laboratories.

Ample facilities for clinical teaching.

Three large Hospitals, and Out-Patient Clinic and Dispensary under exclusive Control of the Faculty.

Entrance requirements same as for literary degree—Fourteen units.

For further information, address

THE REGISTRAR

An Integral Part

of the

University System

College of Medicine

AUGUSTA, GEORGIA.

OFFICERS

President.....	W. W. PILCHER, M.D., Warrenton
First Vice-Pres.....	J. W. PALMER, M.D., Ailey
Second Vice-Pres.....	T. H. HALL, M.D., Macon
Sec.-Treas.....	W. C. LYLE, M.D., Augusta

COUNCILORS

First Dist.—J. Lawton Hiers, M.D.....	Savannah
Second Dist.—Gordon Chason, M.D.....	Bainbridge
Third Dist.—V. O. Harvard, M.D.....	Arabi
Fourth Dist.—C. L. Williams, M.D.....	Columbus
Fifth Dist.—J. N. Ellis, M.D.....	Atlanta
Sixth Dist.—J. A. Combs, M.D.....	Locust Grove
Seventh Dist.—W. P. Harbin, M.D.....	Rome
Eighth Dist.—I. H. Goss, M.D.....	Athens
Ninth Dist.—W. B. Hardman, M.D.....	Commerce
Tenth Dist.—W. J. Cranston, M.D.....	Milledgeville
Eleventh Dist.—A. G. Little, M.D.....	Valdosta
Twelfth Dist.—E. T. Coleman, M.D.....	Graymont

VICE-COUNCILORS

First Dist.—A. J. Mooney, M.D.....	Statesboro
Second Dist.—C. K. Sharpe, M.D.....	Arlington
Third Dist.—A. G. Crittenden, M.D.....	Shellman
Fourth Dist.—T. S. Bailey, M.D.....	Newnan
Fifth Dist.—F. K. Boland, M.D.....	Atlanta
Sixth Dist.—R. H. Stovall, M.D.....	Macon
Seventh Dist.—J. H. Hammond, M.D.....	LaFayette
Eighth Dist.—E. G. Adams, M.D.....	Greensboro
Ninth Dist.—J. S. Tankersley, M.D.....	Ellijay
Tenth Dist.—G. L. Carpenter, M.D.....	Wrens
Eleventh Dist.—J. G. Tuten, M.D.....	Jesup
Twelfth Dist.—M. L. Currie, M.D.....	Vidalia

STANDING COMMITTEES**Scientific Work**

E. E. Murphey, M.D., Chairman.....	Augusta
V. H. Bassett, M.D.....	Savannah
W. C. Lyle, M.D., ex-officio.....	Augusta

Medical Defense

M. A. Clark, M.D., Chairman.....	Macon
J. N. Ellis, M.D.....	Atlanta
E. T. Coleman, M.D.....	Graymont
J. G. Dean, M.D.....	Dawson
E. G. Jones, M.D.....	Atlanta

Organization

T. J. McArthur, M.D., Chairman.....	Cordele
G. R. White, M.D.....	Savannah
W. B. Hardman, M.D.....	Commerce

Public Policy and Legislation

J. R. Littleton, M.D., Chairman.....	Augusta
W. L. Champion, M.D.....	Atlanta
C. C. Harrold, M.D.....	Macon
President and Secretary, ex-officio.....	

Necrology

V. D. Lockhart, M.D., Chairman.....	Maysville
W. B. Emery, M.D.....	Atlanta
S. S. Smith, M.D.....	Athens
M. F. Carson, M.D.....	Griffin
J. M. Hull, M.D.....	Augusta

Arrangements

(Committee to be selected by the Chatham County Society)	
--	--

Delegates to American Medical Association

W. H. Doughty, M.D.....	Augusta
E. G. Ballenger, M.D. (alternate).....	Atlanta
T. J. Charlton, M.D.....	Savannah
T. R. Wright, M.D. (alternate).....	Augusta

COLLABORATORS**History of Medicine**

J. B. Baird, Sr., M.D.....	Atlanta
L. G. Hardman, M.D.....	Commerce
T. R. Wright, M.D.....	Augusta

Medicine

W. W. Jarrell, M.D.....	Thomasville
Ralston Lattimore, M.D.....	Savannah
Thos. D. Coleman, M.D.....	Augusta

Tuberculosis

C. H. Richardson, M.D.....	Montezuma
J. H. Hammond, M.D.....	LaFayette
T. E. Oertel, M.D.....	Augusta

Pellagra

G. M. Niles, M.D.....	Atlanta
E. M. Green, M.D.....	Milledgeville
N. M. Moore, M.D.....	Augusta

Nervous and Mental Diseases

L. M. Gaines, M.D.....	Atlanta
E. T. Gibbes, M.D.....	Gainesville
W. R. Houston, M.D.....	Augusta

Pediatrics

W. Z. Holliday, M.D.....	Atlanta
M. A. Clark, M.D.....	Macon
W. A. Mulherin, M.D.....	Augusta

Public Health

E. C. Benedict, M.D.....	Athens
H. F. Harris, M.D.....	Atlanta
E. E. Murphey, M.D.....	Augusta

Surgery

W. F. Westmoreland, M.D.....	Atlanta
J. R. B. Branch, M.D.....	Macon
W. H. Doughty, Jr., M.D.....	Augusta

Orthopedics

H. J. Williams, M.D.....	Macon
Michael Hoke, M.D.....	Atlanta
H. M. Michel, M.D.....	Augusta

Genito-Urinary and Syphilis

J. L. Farmer, M.D.....	Savannah
W. L. Champion, M.D.....	Atlanta
H. W. Shaw, M.D.....	Augusta

Obstetrics

H. McHatton, M.D.....	Macon
R. L. Miller, M.D.....	Waynesboro
A. J. Kilpatrick, M.D.....	Augusta

Gynecology

E. G. Jones, M.D.....	Atlanta
R. P. Glenn, M.D.....	Columbus
W. W. Battey, Jr., M.D.....	Augusta

Eye, Ear, Nose and Throat

F. P. Calhoun, M.D.....	Atlanta
H. H. Martin, M.D.....	Savannah
W. C. Lyle, M.D.....	Augusta

Roentgenology

E. R. Corson, M.D.....	Savannah
J. S. Derr, M.D.....	Atlanta
C. W. Crane, M.D.....	Augusta

Anaesthesias

T. J. Collier, M.D.....	Atlanta
Chas. Usher, M.D.....	Savannah
M. S. Levy, M.D.....	Augusta

Laboratories

K. R. Collins, M.D.....	Atlanta
V. H. Bassett, M.D.....	Savannah
Everard Wilcox, M.D.....	Augusta

DISTRICT SOCIETIES

DISTRICT	PRESIDENT	SECRETARY
First	E. T. Coleman.....Graymont	Chas. Usher.....Savannah
Second	Hugo Robinson.....Albany	F. M. Martin.....Shellman
Third	C. A. Greer.....Oglethorpe	M. R. Smith.....Cordele
Fourth	H. J. Goodwin.....Rooptville	Homar Boatright.....Carrollton
Fifth	W. D. Travis.....Covington	W. S. Ansley.....Decatur
Sixth	W. J. Little.....Macon	I. H. Adams.....Macon
Seventh	A. B. Greene.....Cartersville	T. Lowry.....Euharlee
Eighth	T. J. Willis.....Washington	D. H. DuPree.....Athens
Ninth	V. D. Lockhart.....Maysville	A. D. White.....Gainesville
Tenth	J. R. Beall.....Blythe	G. A. Traylor.....Augusta
Eleventh	H. C. Wheelchel.....Douglas	T. J. Carswell.....Waycross
Twelfth	(New District, not yet organized.)	

COUNTY SOCIETIES

COUNTY	PRESIDENT	SECRETARY
Baldwin	J. W. Mobley.....Milledgeville	W. F. Tanner.....Milledgeville
Banks	V. D. Lockhart.....Maysville	J. D. Rice.....Homer
Bartow	A. T. Calhoun.....Cartersville	H. E. Felton.....Cartersville
Ben Hill	E. J. Dorminy.....Fitzgerald	L. S. Osborne.....Fitzgerald
Bibb	F. M. Cunningham.....Macon	W. D. Hereford.....Macon
Blue Ridge	J. S. Tankersley.....Ellijay	C. B. Crawford.....Blue Ridge
Brooks	S. S. Galuden.....Quitman	J. S. King.....Quitman
Bulloch	D. E. McEachern.....Statesboro	F. F. Floyd.....Statesboro
Burke	C. H. Cox.....Waynesboro	J. M. Byne.....Waynesboro
Butts	B. F. Aiken.....Jenkins	W. H. Steele.....Jackson
Carroll	M. M. Hallum.....Carrollton	R. E. Foster.....Carrollton
Chatham	V. H. Bassett.....Savannah	A. J. Waring.....Savannah
Clarke	A. C. Holliday.....Athens	M. F. Matthews.....Athens
Cobb	W. M. Kemp.....Marietta	W. H. Perkinson.....Marietta
Coffee	C. W. Roberts.....Douglas	Quitman Holtou.....Douglas
Colquitt	J. H. Green.....Hartsfield	J. E. Lanier.....Moultrie
Coweta	T. B. Davis.....Newnan	T. S. Bailey.....Newnan
Crisp	A. J. Wheelchel.....Cordele	T. E. Bradley.....Cordele
Decatur	N. L. Spengler.....Donalsonville	Gordon Chason.....Bainbridge
DeKalb	C. R. Watkins.....Chamblee	W. S. Ansley.....Decatur
Dougherty	A. W. Walker.....Albany	Hugo Robinson.....Albany
Elbert	C. E. Earle.....Elberton	L. P. Eberhart.....Elberton
Emanuel	C. R. Riner.....Summit	R. C. Franklin.....Graymont
Floyd	W. W. Mangum.....Rome	W. L. Funkhouser.....Rome
Forsyth	F. G. Moss.....Royston	J. H. Hockenhuil.....Cumming
Franklin	L. B. Clarke.....Atlanta	B. T. Smith.....Carnesville
Fulton	W. B. Floyd.....Plainville	R. R. Daly.....Atlanta
Gordon	C. O. Copelan.....White Plains	E. O. Shellhorse.....Calhoun
Greene	W. V. Chandler.....Baldwin	E. G. Adams.....Greensboro
Habersham	A. D. White.....Gainesville	R. B. Lamb.....Demorest
Hall	R. C. Wiley.....Sparta	E. T. Gibbs.....Gainesville
Hancock	L. Landers.....Commerce	J. A. Brown.....Sparta
Jackson	F. S. Belcher.....Monticello	J. C. Bennett.....Jefferson
Jasper	J. W. Pilcher.....Stellaville	C. L. Ridley.....Hillsboro
Jefferson	L. J. Belt.....Milen	G. L. Carpenter.....Wrens
Jenkins	J. J. Baston.....Dublin	W. E. Rushing.....Millen
Laurens	A. Griffin.....Valdosta	W. C. Thompson.....Dublin
Lowndes	C. H. Richardson.....Montezuma	J. M. Smith.....Valdosta
Macon	L. E. Roper.....Cower	C. A. Greer.....Oglethorpe
Madison	E. B. Terrell.....Greenville	J. L. Baker.....Carlton
Meriwether	J. F. Lancaster.....Forsyth	P. W. Fitts.....Greenville
Monroe	J. M. Croke.....Columbus	J. O. Elrod.....Forsyth
Muscogee	Sterling Gihson.....Thomson	G. S. Murray.....Columbus
McDuffie	S. W. Everett.....Almon	B. F. Riley.....Thomson
Newton	J. T. Elder.....Farmington	O. L. Holmes.....Covington
Oconee	R. D. Herrman.....Eastman	W. M. White.....Watkinsville
Ocmulgee	J. A. Mallory.....Concord	J. C. Wall.....Eastman
Pike	C. V. Wood.....Cedartown	M. M. Head.....Zebulon
Polk	V. H. Taliaferro.....Eatonton	H. M. Hall.....Cedartown
Putnam	E. C. McCurdy.....Shellman	S. A. Clark.....Eatonton
Randolph	T. D. Coleman.....Augusta	F. G. Barfield.....Cuthbert
Richmond	E. R. Anthony.....Griffin	W. C. Kellogg.....Augusta
Spalding	Jeff Davis.....Toccoa	J. M. Thomas.....Griffin
Stephens	R. L. Grier.....Lumpkin	C. L. Ayers.....Toccoa
Stewart	J. A. Rhodes.....Crawfordville	M. Walton.....Lumpkin
Taliaferro	J. T. Arnold.....Parrot	L. R. Brown.....Sharon
Terrell	W. W. Jarrell.....Thomasville	C. T. Kenen.....Dawson
Thomas	W. H. Hendricks.....Tifton	Harry Ainsworth.....Thomasville
Tift	J. M. Meadows.....Vidalia	L. A. Baker.....Tifton
Toombs	H. L. Carroll.....Babcock	T. C. Thompson.....Vidalia
Tri	F. M. Ridley, Jr.....LaGrange	C. K. Sharp.....Arlington
Troup	J. M. Underwood.....Lafayette	John Banks.....LaGrange
Walker	J. C. Rippard.....Waycross	J. H. Hammond.....Lafayette
Ware	G. R. Maner.....Warrenton	T. J. Carswell.....Waycross
Warren	J. G. Tuten.....Jesup	R. D. Nash.....Norwood
Wayne	A. W. Simpson.....Washington	E. C. Crummev.....Jesup
Wilkes	W. C. Tipton.....Sylvester	O. S. Wood.....Washington
Worth		J. L. Tracy.....Sylvester

Journal of the Medical Association of Georgia

W. C. LYLE, M.D., Editor - Augusta, Georgia

THE MEDICAL SOCIETY AND ITS RELATION TO PUBLIC HEALTH*

Thos. J. McArthur, M.D., Cordele

It is not my purpose to consume the time of this body in arguing the importance of medical organization, for it is presumed that all agree on this. Suffice it to say that the Medical Society is capable of doing more to remedy the many evils which afflict the profession than all other things combined. Then, taking it for granted that it is important for us to have medical organization, and that each county have a medical society, it is to be regretted that we have so few.

Some of the counties organized soon after our reorganization have failed to keep up a society and we have lost them as members of this body. Many other county societies merely exist without ever meeting, the members paying their dues in order to affiliate with the State Association. The State society now probably has less than one thousand members, a falling off of three or four hundred in the last three or four years. There probably is more than two thousand physicians in the State eligible to membership, which gives us only about one-half of the eligible physicians in our State Association, and we boast of being the Empire State of the South. This is a deplorable state of affairs which should be remedied, and I firmly believe it can be without any great change of our plan of organization. We have simply arrived at that time when we must take another step forward if we wish to accomplish all we should.

The Councilors cannot be censured for this state of affairs. After the reorganization a few years ago the Councilors went to work in earnest, and the results were very gratifying, as many counties were organized increasing the membership more than one hundred-fold in three years. It was in many instances easier to organize a county than it was to keep it organized and much of the time of the Councilors

would have been required to keep up interest in the organization, and as the Councilor was in active practice himself it was practically impossible for him to devote sufficient time to the work to keep from ten to fifteen societies going.

Therefore, we need a man to devote much of his time to this matter, assisting the various Councilors throughout the State. Our State Association should put an organizer in the field, paying him for his time. It would accomplish more than anything we could do. It might be argued that we are not able to do so for lack of funds. This is the way to get the funds. A good organizer and lecturer would more than earn his salary the first year. It would not be necessary to demand all of his time. Two or three months of his time the first year might be sufficient to add four or five hundred members, which would bring in enough dues to pay his salary, and after the first year or two the organizer could be dispensed with and most of these members being retained paying their dues, there would be a net income to the Association of from one thousand to fifteen hundred dollars a year, to say nothing of the addition of others as the direct effect of these societies.

But organization is not the end sought for. It is the means to an end. It is the society that does something that accomplishes any good. Indeed, it might be said that it must accomplish something for the benefit of its members to maintain its existence. The county society which dies after being organized is the society that does nothing.

I shall not have time to speak of all the things which a society should do, but will try to mention some which occurs to me as being important and which but few societies undertake. Medical organization in Georgia has reached that stage when it is absolutely necessary that our medical societies take some active part in the public health propaganda that is receiving so much attention throughout the country. It is very gratifying to observe the increased interest manifested in these things. Our State Board of Health and their field sanitation corps are doing an excellent work

* Read at meeting of Medical Association of Georgia, Augusta, Ga., April, 1912.

and are improving same as rapidly as their limited funds will admit.

The Women's Clubs are a very valuable aid in the work of sanitation and to them is due much of the credit for the increased interest taken in preventive medicine by the general public.

A few local health boards are taking a great deal of interest in sanitation, and occasionally a member of the medical profession is actively engaged in disseminating knowledge along these lines; but the medical society rarely ever takes the interest in this work that it should. To my mind it seems that the local medical society could and should assume a great deal of the responsibility for teaching preventive medicine and creating a sentiment in favor of better sanitary conditions; as in this way each physician in the community is behind the movement and is credited with his part of what is done. Of course, every doctor has not the same gift or tact for speaking, writing and teaching along these lines, but there are usually some in every community who can and who would if they were given sufficient co-operation, and all could help in the cause with those for whom they work.

I think an ideal plan would be for each local society to arrange for occasional public health meetings to which the public should be invited. A program should be arranged including doctors, teachers and members of women's clubs, and occasionally, a prominent doctor from a distance.

Each society should have an educational committee, whose duty it should be to disseminate knowledge of this kind. This committee should arrange with the newspapers of the community to publish articles and clippings furnished them by the committee at regular intervals. These articles and clippings should show up the various medical frauds, patent medicine evil and contain other matter appropriate to the season, and the committee should be given credit for the matter by having it stated that it was furnished by a committee from the local medical society, without giving the names of the committee. In this way the entire organized medical profession would get credit for the work and no individual get any advertisement out of it.

This committee should also arrange with schools for addresses by members of the committee, or society, on public health topics. These lectures should be given in

a systematic way, teaching the general rules of hygiene and sanitation, including information about contagious and infectious diseases. Arrangements might be made with supervisors of teachers' institutes for talks to the teachers, at the close of which talk the teachers might be told that lecturers would be furnished their schools when desired, and it is probable that most of the teachers would request that one be furnished. In this way the teachers and pupils are instructed in these things, and they, in going out into the homes, would disseminate this knowledge, and when they became business men and lawmakers, would give a more intelligent consideration to such, resulting in the enactment and enforcement of needed medical laws.

An other reason why the local medical society should be more active along these lines is that when the society as a whole is preaching sanitation the individual doctor would of necessity pay more attention to these things. It is a lamentable fact that many physicians do not put into practice the definite knowledge we have of many of the infectious diseases, such as typhoid fever, malaria, tuberculosis, etc. If the local medical society was teaching in the way outlined above, that malaria was transmitted only by the bite of mosquitoes, and that it was absolutely necessary that each patient be screened to prevent him infecting mosquitoes, which in turn would transmit the disease to other members of the family, attendants and neighbors; in other words, if the society was teaching the community that the same precautions against malaria used by the United States authorities in the Panama Canal Zone would free the community from malaria, and that it was criminal negligence when the attending physician failed to give proper directions in regard to such matters when he had a patient sick with malaria, typhoid or T. B., and that it was a reproach on the attending physician and attendants when they permitted a case of typhoid, tuberculosis, or malaria to cause other cases in the family or attendants, then the individual doctor would be forced by popular sentiment to give definite, positive directions along prophylactic lines and urge that they be carried out.

The local medical society should also see that each county and town, large enough, has a board of health, and insist that only members of the medical society are given

positions on same. This might seem unimportant, but there is much that these boards can do, and in order for them to have the co-operation of the profession only members of the organized profession should be placed on them.

I repeat that medical societies should take more interest in these things. If they did, it would not so often occur that physicians occupy such positions who do not receive the support and co-operation of the profession. This is often the cause of the public getting the idea that doctors cannot agree. If the organized medical profession in a community took hold of these things and saw to it that these boards were established and that their members were given positions on them, it could, in a large measure, direct the work of the board, for it could be talked over in the society and agreed to, thereby securing the co-operation of the entire profession, which is absolutely necessary if the board is to accomplish its full quota of good to the community.

Away with the idea that the doctor engaged in active practice should not engage in this work of teaching preventive medicine for fear that he would be charged with simply advertising himself, for the public is now more interested in knowing how to prevent than how to cure diseases; and if the organized medical profession fails to do its part of the teaching it will be charged that we are not interested in preventing disease, regardless of all our boasted ethics and claim as being benefactors of the human race.

It must be expressed in a nutshell as follows:

The organized medical profession should so teach preventive medicine to the public that they would know that there was definite knowledge concerning prophylaxis against such diseases as malaria, typhoid, tuberculosis, etc., and that the individual doctor would be forced to instruct his people in each individual case regarding these matters.

Discussion on Dr. McArthur's Paper

Dr. Hugh H. Young, Baltimore, said that in Baltimore much interest had been stimulated because in February they had organized a public health conference, and they had a building set apart as a meeting place; the building belonged to the

faculty of the Medico-Chirurgical faculty, but originally it belonged to the Library Association. They now had two meetings a year, one occurring in the fall in some other part of the State, and the other was a stated meeting in Baltimore. In this building were excellent lecture halls, a splendid library, and so forth. A clinical microscopical course was given in the afternoon twice a week on the various subjects of medicine and specialties, bringing out the more recent laboratory methods.

With regard to the public health work it was arranged that once a week they could have lectures given by two or three men who were actively engaged in this important field of work as, for instance, men from the United States Public Health and Marine Hospital Service; from this service, too, was sent much material for demonstration purposes. Some afternoons the citizens and school children were in attendance. The lectures and the demonstrations were so attractive during one week that they were asked to have the work continued for three weeks longer and during that entire month the State Board of Health, the Army Medical Corps and the United States Public Health and Marine Hospital Service sent men to make the demonstrations. They picked out intelligent medical students and had them demonstrate the various things to the school children, to groups of people from the factories, and to those from other channels in life. This work was of wonderful benefit. Even members of the Legislature were invited to attend and for them a special demonstration was given and they were practically carried off their feet and at once voted the use of ten thousand dollars (\$10,000) for the continuance of this work. They tried to get closely in touch with these men and to interest them in this public health work. The Tuberculosis Association had a car which was filled with material to demonstrate what they were doing in their fight against this disease; this car was sent to all parts of the State. Dr. Young thought that the greatest field for the work of the State Medical Society lay in public instruction; one of their primary objects should be to instruct each other as well as to amuse each other.

Dr. T. J. McArthur, Cordele, believed that the members of the Medical Association of Georgia should do more active work if they wished to benefit themselves

and bring the doctors closer together. There must be more medical societies before we can accomplish much good to ourselves or to the public. This question of an organizer was one of the most important things, in his opinion, that this body could consider in the way of a step forward. He believed that an organizer to go about through the various districts of the State, a man who was gifted in oratory and one who was well informed on the subjects he was supposed to talk about, could accomplish a great deal of good with both the profession and the laity and could get the laity interested. He trusted that the Councilors and the House of Delegates would give this subject due consideration.

Dr. W. B. Hardman, Commerce, said that the paper opened up a very large field and much might be said which was both encouraging and discouraging. One of the points he had already discussed with Dr. McArthur, the Association employing an organizer for the purpose of building up the Association in every respect. He did not think it proper that they should look at this matter entirely from a financial standpoint, although of course they must try to make ends meet. There were ends to be attained by the employment of such an organizer—an organizer might work for three months of each year and receive a remuneration of one thousand dollars (\$1,000) for salary and expenses. Such a man, working three months in the year, would benefit the Association probably twice as much as could the Council working for twelve (12) months in the way they must needs work. This work would be of great benefit to the medical profession; they would be benefitted by being made better doctors and by being made acquainted with the organization and their interest would be stimulated in the work of the county and district medical societies. He thought that they should all feel proud of the things which had been done. This matter of organization should be in the hands of some physician who had retired from active work and who had plenty of time and plenty of money to go over the State of Georgia; such a man could do a great deal of good which would be of lasting benefit to the Association.

Dr. J. W. Palmer, Ailey, heartily agreed with Dr. McArthur in what he had said, and it seemed to him that the House of

Delegates should be instructed to take this matter up, to thresh it out, and then formulate some plan by which the method could be placed in operation.

THE EUGENICAL CONSERVATION OF MAN*

Dr. A. L. R. Avant, Savannah

This subject, as the title would imply, is a very broad one, and one that may be investigated from many standpoints, and to discuss it from its varied relationship to our race would require more space and time than is allowed this paper, hence we propose to consider it from the relationship that individuals, institutions, and nations bear to it, and the great neglect that each are guilty of towards its accomplishment. On first thought the presumption would be that every force and every power would be persisted in and energetically pursued until this high aim was consummated, whether that power existed in the individual, the institution, or the nation. But on second thought, and a more deliberate investigation, we find that it is the most neglected proposition that confronts the civilized world today (a broad assertion, but we believe literally true), and at the same time we doubt not that all would readily admit it should occupy the foremost thought of all men, much more so all wise philanthropists and men who control their millions and make pretense that their highest aim in life is to do good. But when we closely scrutinize the works and acts of practically all men and institutions and we might add, with equal propriety, all nations, we find them striving to assist in beautifying and building up the vegetable and lower animal kingdom, and neglecting to dispense their energy and their gold in the uplifting and upbuilding of our own race. While we can look around and find animal fanciers devoting much time and great amounts of money in breeding, fostering and raising hounds and poodle dogs, bird dogs, and various other practically worthless kinds of the canine family, we will find like conditions existing with the horse fanciers, together with the admirers of the cow, and the raisers of swine and all other kinds of the animal kingdom, we find many bird fanciers who

* Read at meeting of Medical Association of Georgia, Augusta, Ga., April, 1912.

expend vast sums of money for improving and building up of some of the feathered tribe; much is being spent, and properly and justly so, in improving and perfecting strains of numerous varieties of chickens and turkeys, and other kinds of those domestic fowls. We can visit our zoological gardens or parks in our National Capital, or others of our large cities and the evidences of the enormous sums of money that we see there expended, not only for the purchasing of some of the animals that we see there, but the amount that is expended in their maintenance is fabulous. We will next turn our attention to the vegetable kingdom; we will first think of our beautiful hot houses and flower gardens, where we see evidences of so much money having been spent in producing the great varieties of beautiful flowers and shrubbery that we find there. Now all these are only for their beauty, to tickle the fancy of the eye, fascinate the alfactory nerve—all of which, I dare say, is legitimate and laudable and in every way commendable, and perhaps advisable. We will next turn our attention to the cereals, which constitute such a large percentage of our food product, both for our animal kingdom and ourselves. Millions has been spent in bringing them up to their present state of perfection and they are today making not only two ears of corn grow where only one grew before, but often ten or a dozen; where our land formerly produced five bushels of oats and wheat to the acre, they are now producing forty to sixty, due to a great extent to the improvement of the various varieties by the proper selection of the seed. We can then think of the wonderful improvement that has been brought about in the production of our fleecy staple, that practically clothes the world, gives employment to millions of our citizens and has added untold millions of gold to our coffers. A very material part of this wonderful improvement has been accomplished by the proper selection of the seed by eliminating the bad and conserving the good, and today our farmers are making strenuous efforts to stop the ravages of the boll weevil by selecting the cotton seed from the plants that mature early in order to get the crop of cotton matured before the bug makes his appearance in the spring or early summer. So much for the good sense and wisdom of the farmer. We have enumerated and discussed these

subjects in this limited way in order to, in some small degree, get your minds concentrated on the fact of what conservation and improvement of the various species of the vegetable and animal kingdoms has accomplished, in order that we may more readily comprehend and more easily understand the thoughts that we hope to present for your consideration concerning the Conservation of Man, for, unless you have been more fortunate than I have, you have not been able to find much literature on the subject, in fact practically nothing is written on the subject that I have been able to procure, hence the thoughts that I have and may present are practically original. So from the foregoing assertion you can readily see why it is so necessary that we argue the issue so much from an analogous standpoint, after having reviewed the wonderful progress and improvement that has been made in the vegetable and lower animal kingdom and the millions of dollars that has been spent in their interest and betterment. But when we turn an investigating eye to see what has and is being spent and done in conserving and preserving our race in its high altitude, above all the other subjects enumerated the comparison is pitiable in the extreme. One would naturally think that our greatest efforts in beautifying and building up would be of ourselves and our kind; but unfortunately what is everybody's business is no one's, hence we do not see the individual, with the every-day business ability, neither the philanthropist, with his greater insight into intricate matters, making any efforts in that direction. Some States have enacted laws leading in that direction, but they are far from being what seems to be needed in the premises, as they only (so far as my knowledge goes) prohibit the marriage of the imbecile and feeble-minded, which we well know will not prevent the propagation of the race, but seems to us that it will only make bad matters worse by giving us more illegitimate children to care for and bring greater reproach upon the community. Our National Government itself pays no attention at all to the betterment of the race of mankind from a conservation standpoint; it seems to be perfectly indifferent regarding the sanity and perfection of its citizens and the propagation of the better of our kind. But when she needs men to aid in our defence against an invading foe, then

it shows its hand, as it will consider none but those who are physically and mentally perfect—the dwarfs and imbeciles and degenerates are not wanted; nay, will not be accepted. Now looking at this from any standpoint, we are forced to the conclusion that the Government does realize our need of a perfect manhood, not only in times of war, but at all times in all branches of our service, as only sane, healthy and strong men and women are accepted for service in any department. Yet while she is making these demands for our best men, she is making no efforts to make amends by trying to elevate the surfdom to a higher and better life by putting the power and forces of her strong arm to the building up of our race, by eliminating that which is bad and conserving that which is good, forgetting the fact that great kingdoms and dynasties have crumbled and fallen on account of the degeneracy of their people, not in numbers, but in intellect. It is to be hoped that our great Nation may not follow in the footsteps of our unfortunate sister republics, but that she may profit by their experiences. I was reared in the rural districts of our grand old commonwealth and you who have had like experience of having been reared in the country and having practiced medicine on her beautiful hills and have since migrated to the city to follow your profession, will bear me out in the assertion that in the country districts we are better enabled to see the evil influences of the propagation of the unfit elements of society, for there one knows and sees every individual for miles around and are usually familiar with many of the domestic relations that exist in most of the homes; and it is there, where everything is laid bare and fully exposed, that we are able to see the dire results of the cohabiting of the unfit, both from the legitimate and the illegitimate standpoint, those sanctioned by the law and those that are not. No one (unless they have lived and worked among them) is fully able to realize the lamentable conditions that often exist in some of these homes, where two of these unfortunates, unfit, man and woman, have been permitted by the law to become man and wife in order to be legally qualified to propagate their weak, half-witted offspring upon the society of the community in which they live, and it is a natural consequence to suppose that their posterity is more weak and imperfect than they

themselves are. Hence, we expect every generation to become more and more degenerate than their predecessors, and the result is to be observed in every county in this grand old State of ours. Instead of a general upbuilding and progress of our entire citizenship, as many now seem to think is the case, we find by consulting statistics that we have a decline, instead of progress, among the class referred to. And not only in the way referred to, but it often occurs from various causes and reasons that some normal individual is induced by some motive to enter into wedlock with one of these unfortunates, and my observation has almost invariably been that some, if not all, of their offspring have been degenerates. This intermarrying of the unfit and weak-minded has so dwarfed the intellect of some rural communities that it is pitiable in the extreme. Fortunately, in the cities we do not see so much of this type of suffering as we do in the country; first, we have not observed so many of this class of citizens in the cities as in the country, and second, because in the cities there is better facilities for the care and keeping of them secluded. In other words, the skeleton is easier kept in the closet in the city than in the country. Another unfortunate feature of this class of our citizens is that they are very prolific and rear large families, and in the natural order of things we see them seeking for one of their kind to mate with, so it is a repetition of the old, old adage that like begets like and that every kind loves its kind.

Then we have other causes which contribute to the degeneracy of our race—such, for instance, as a drug habit, alcoholism, venereal excesses, nervous exhaustion, a mind highly concentrated on any one subject to the exclusion of others unfits the individual for the propagation of our race; living under high tension from any cause disqualifies us from begetting normal offspring.

We will now look into our methods and customs of obtaining a better class or a more desirable specie of animals. Every one knows that if we want a race horse that we will not go to the ordinary draft horse to obtain it and vice versa; if we wish a cow that will give us much milk and produce rich butter, we will most surely not go and select us a cow from a herd of cattle in the woods, but will hunt for a cow with a pedigree, one noted for

her milk and butter production. In like manner all stock raisers hunt for the best strain of animals obtainable from which to select their breeders. This phase of the subject is so apparent and reasonable that it needs no discussion, for we observe this rule applying from the greatest down to the lowest order of our animal and vegetable kingdoms—everything in creation observes this correct rule of procedure. But now, how about our own race? The view is startling, the investigation reveals deplorable conditions as we inquire what is being done for the upbuilding and betterment of our own conditions; and the answer says, nothing. We find every one sitting idly by and permitting everything pertaining to that go on the even tenor of its way; nothing being done to stop the progress of our downward course to ultimate decay. We are permitting, unhindered, this class of our population to go on multiplying their kind, continually adding more wards to our already over-filled hospitals, almshouses, asylums and penitentiaries. Yet there is a continual hue and cry for more hospitals, more almshouses to care for these poor unfortunate creatures; more charitable institutions to be supported by our municipal governments, to which this class never contribute a farthing, neither do they give praise nor entertain gratitude, but seem to think that they are due special care and consideration because of their degeneracy and degradation. In our own State, with all its greatness, we have a very large percentage of our people in our State sanatorium—in fact it is often taxed to the limit to care for this class. Our state prisons are filled to overflowing; how many of these poor unfortunates are serving time for crimes committed I know not, and I doubt if any one else does. Statistics show that this condition is increasing at a rapid rate, not only in Georgia, but in all the States. And instead of us as a profession, whose avocation and business it is, to safeguard the health of the people and to lift them up and increase their longevity and make them better, we have sit idly by and beheld with un pitying eye their degradation and shame, and our burdens to increase. Our law-makers have each succeeding year gone to Atlanta and have heard the brilliant oratory of our talented and gifted sons expend their energy in espousing causes which are often ridiculous and of no importance, yet we have no

record before us where one has as yet lifted his silvery voice in championing the cause of these poor unfortunates. Now, whether they have not felt their ability to be equal to the occasion in tackling so momentous and important a subject, or whether they were afraid that they might lose votes, I am not prepared to say, but this we do know, that they have failed up to this writing to advocate any scheme, or devise any plan by which this class can or should be benefited. And now, when we turn our attention to the city of Washington, the capital of our great Nation, in whose magnificent halls the brainiest men of the world meet to discuss any and all measures that pertain to our welfare as a people, we find nothing chronicled there that would portend to show that they had ever been thought of by these great statesmen, whose duty it is to foster every interest that would better the condition of their constituents. We find these same men in our law-making department of both Nation and State appropriating vast sums of money to improve the lower animal kingdom, also to build up the vegetable kingdom, always in an effort to propagate the better quality and to suppress the inferior. It is a very noteworthy fact that our State and National Government spend great sums of money annually in an effort to control and stamp out contagious diseases, and have succeeded wonderfully well, be it said to their credit, and it is their duty to have done this. Now, inasmuch as our philanthropist, our State nor National Government has put forth any efforts to stay the downward tide in this crusade against degeneracy in man, we think that it is time for us to take the matter up, in an effort to suggest a remedy, which, to my way of thinking, consists in practically two remedies, to-wit, Vasectomy and Castration, which you all know consists in ligating the vas-deferens and severing, which does not destroy the sexual appetite nor pleasures, but absolutely prevents the propagation of the race by those so operated upon. We believe this should be performed on all the unfit male members of our race who are quiet and harmless. It is said to be a very easy and painless operation, not even requiring an anesthetic nor the discontinuance of one's avocation. We believe that vicious criminals and those who are of a low rate of mentality in whom there might be danger to his associates of the opposite sex,

should be castrated. Of course in the female it is of a more serious nature, as it would necessitate a median incision through the abdominal wall and a ligation and severance of the oviduct, which would in no way interfere with her sexual propensities nor pleasures. After years of careful thought and study there has not been any other feasibly solution of the subject presented to our mind. And while I present this as my earnest and honest conviction I well know that the idea will be considered by many as the idea of a fool or the dream of a crank, but I know that you will all readily agree that there is a crying need for the relief of the situation, and until you are able to present a more feasible and better method I shall continue to occupy my position. The remedies I have suggested here today would be considered by our law makers as too drastic and radical and would infringe on the rights conferred on all by our much lauded Constitution, which is said to guarantee equal rights to all and special privileges to none; but when we pause to consider that sentence of our Constitution, it has reference to those of our people who are in every way normal and fully equipped with all their reasoning faculties—who are sane and in every way amenable to all other features of our Constitution, under all its provisions. This class of citizens are to a great degree irresponsible and should be cared for by those whose duty it is to see after that class of our people, and they should cease to propagate their kind, and if that were done, in a very few generations we would practically have no feeble minded and unfit members of society.

Now, I fully realize the shortcomings and imperfections of this paper far better than any of you, per haps, but if I have been the instrument in causing any of you to think, and out of that thought get action, I will be well paid for the effort.

Discussion on Dr. Avant's Paper

Dr. Ralston Lattimore, Savannah: The subject of Dr. Avant's paper is not a new one. We are more or less familiar with the history of the notorious Juke family, a family that ran through five generations, covering a period of about seventy-five (75) years. As a matter of fact, every one landed in the almshouse, the penitentiary or insane asylum, and it cost the State of New York about one million three hundred

thousand dollars (\$1,300,000) to support and care for this family. One member alone of this family, himself an illegitimate child, procreated fourteen (14) illegitimate children. The importance of this subject is being realized more and more every day and many States are now falling in line with Indiana, Colorado, California and Iowa and others. This is a subject of greatest importance.

With regard to the question of the proper surgical procedure, our guest, Dr. Young, of Baltimore, can tell us. It had been stated that probably in four (4) generations, if proper procedures were properly carried out, fifty per cent. (50%) of the prisons, insane asylums, almshouses and other places where these people were cared for, would be unoccupied. It seems to me that this important subject the Medical Association of Georgia should take up at once. The surgical procedure should be left to a committee of three or more who shall pass upon the individual merits of each case called for in the best interest of the patient and of the community. A resolution by the Georgia Medical Society, of Savannah, will, at this session, be presented to the Georgia Medical Association for consideration. I sincerely hope the resolution will pass and that before long the good old State of Georgia, the Empire State of the South, will be in line for the betterment of the progeny of the human race at large.

Dr. Hugh H. Young, Baltimore, said that of course the operation of vasectomy was the only thing that need be done in these cases and, if properly performed, was an operation that was perfectly safe. It was essential that a great deal of the vas should be removed. He called attention to what was so often done in Indiana; after simple dividing the vas was performed, the individuals immediately went to Kentucky where they had an anastomosis done. He believed that some law should be passed to prevent this reanastomosing. The operation vasectomy only prevented procreation and did not in any way affect the sexual act. Live spermatozoa were to be found in the testicle after the operation; after excision of the vas there was no atrophic effect upon the testicle and coitus was not at all interfered with. There should be a law in every State which provided for vasectomy in these cases and no case should be subjected to operation until passed upon by a competent medical committee.

Dr. H. T. Harriss, Madison, asked if the X-ray did not produce practically the same thing as did a vasectomy.

Dr. J. W. Palmer, Ailey, referred to one point that had not been brought out either in the paper or in the discussion, the intermarriage of kin; there occurred a great many degenerates as the result of the intermarriage of relatives. He recalled the instance of a brother and sister who were separated when very young and who lived in different parts of the country. They met, loved and were married, not knowing then their relationship. Four children were born to them and all were idiotic. It only developed after that they were brother and sister.

CEREBRO-SPINAL MENINGITIS*

W. D. Travis, M.D., Covington

The first recognized epidemic of cerebro-spinal meningitis occurred in Switzerland in 1805. In 1806 we had an epidemic in the United States and Canada. In 1842-1850 there was another outbreak in America. In 1872-1874 this disease was epidemic in New York City and Boston. A later occurrence was in 1896-1903. The last and most important epidemic to us began in Dallas, Texas, in October, 1911, and has not yet been suppressed, but has spread into Oklahoma, Kentucky, Louisiana, Missonri, Tennessee, and other points in the South and Southwest.

The *Diplococcus Intracellularis Meningitidis*, discovered by Weichselbaum in 1887, is now generally acknowledged as being the causative factor in this disease, although the final link in the chain of proof has not yet been demonstrated. Atmospheric conditions have considerable influence as to causation.

This diplococcus has been found in the cerebro-spinal fluid—nasal discharge—blood—and urine. It is aerobic and grows best at about 37 degrees Centigrade in culture media containing a large amount of proteid. The growth is facilitated by the addition of a small amount of glucose (1 to 5%) to the culture medium.

The specimen for examination should be centrifuged—a small portion of the sediment spread on a cover glass—dried in the air and fixed by passing through the flame.

Staining should then be done by the Gram method, with which you are all familiar. The meningococcus, like the bacillus coli and typhosus is Gram negative, while the pneumococcus and staphylococcus-pyogenes aureus are Gram positive.

Man is the only known host of the meningococcus, and it is easily killed by antiseptics, by a temperature of 50 degrees Centigrade in five minutes, or 65 degrees Centigrade in three minutes, or by exposure to sunlight for a few hours.

Meningococci have been found oftentimes in persons apparently healthy, and just what factor is necessary to cause development of the disease in such persons is as yet undetermined. Their primary seat is in the naso-pharynx, and the secretions of all persons who come in contact with cases of this disease should be carefully watched. Carriers can be made negative in a few days by the use of antiseptics in the nose and throat, and the internal administration of forty-five to sixty grains of urotropin daily.

In the recent epidemic certain points are worthy of mention. In most text-books the statement is made that the onset is sudden, but this has not been true, as the onset in most of the recent cases has appeared as an accumulation which has been followed by an abrupt increase of severity. Dr. Sophian states that he does not believe "any case, in which the patient is well in every respect before the disease begins to show, will ever show a sudden violent outbreak."

This fact is of great importance, as it gives us an opportunity to begin treatment early, with its resultant increase of chances as to recovery, sometimes we may even abort the attack. Large areas of herpes, not limited to the tongue or lips, attended by a marked rise of temperature have been common.

Petechia have occurred in five per cent. of the cases, and are a manifestation of a violent septicaemia, which is not necessarily fatal, although their occurrence is often attended by such a severe collapse that the patient dies before treatment can be of any avail.

As soon as you suspect cerebro-spinal meningitis you should make a lumbar puncture, remove a part of the cerebro-spinal fluid, and inject Flexner's serum.

Now, just a word as to the serum. "Antimeningococcic serum is obtained from horses immunized against the meningococ-

* Read at meeting of Medical Association of Georgia, Augusta, Ga., April, 1912.

cus by repeated long-continued injections of live cultures, of killed cultures, or the disintegration products (antolysates) of cultures." There is a difference between this serum and that used in the treatment of diphtheria and tetanus, in that anti-meningococcic serum is bacteriolytic, opsonic and only slightly antitoxic.

Lumbar puncture should be made either between the third and fourth or the fourth and fifth lumbar vertebrae, under strict asepsis. The point of election for the introduction of the needle is between the spinous processes of the fourth and fifth lumbar vertebrae. A line drawn across the back at the level of the highest points of the iliac crests passes between these processes. This should be verified by counting.

Local anaesthesia is useless and general anaesthesia should only be used in cases of extreme violence. The patient should be placed on the side, and enough assistants provided to prevent any movements being made.

Dr. Sophian makes use of what he calls "water anaesthesia." He gives the patient, just prior to the beginning of the operation, a straw in a glass of water. As the needle is started in, the patient sucks the water through the straw. This sucking uses up, as it were, the reflex.

The needle, with its obturator, should be introduced a little to one side of the median line, forward, slightly upward and inward. In a child you may have to introduce the needle three-fourths to one inch, and in an adult one and a half inches to two inches. You can tell that the needle has entered the dural sac by the marked lessening of resistance. The cerebro-spinal fluid should be caught in an aseptic vessel for examination, but we ought not to wait for a report before using the serum, as the earlier it is used the more favorable the prognosis will be, and in the event the report fails to show meningococci, if the operation is properly done no harm will result.

Before making the puncture, a blood pressure apparatus should be applied, and frequent readings taken during the entire operation. As a rule there is a drop in the pressure on removing the fluid. This drop should not be allowed to go below 10 millimetres of mercury for an adult, and 5 millimetres for a child, before beginning the introduction of the serum, which

should be at body temperature. As the serum is introduced there is usually another drop. A total drop of 20 millimetres of mercury in an adult is an indication for stopping further injection. Under this plan a smaller dosage of serum, 20 to 25 C.C. in adults, and less for children is used, and there is not so much danger of troublesome symptoms arising from the injection. In the event that there is no change or a rise of pressure on the withdrawal of the fluid, we may decide as to the amount to be removed by the frequency of the drops from the needle—one drop every three to five seconds being considered as normal.

The gravity method, using a glass funnel and short rubber tube, is the safest and best method for injecting serum, as the serum may be withdrawn by lowering the funnel, should the necessity arise. The time consumed in making the injection should be 10 to 20 minutes.

As the pressure falls there is an increase of stupor—a more noisy respiration, and a dilatation of the pupils. The pulse is apt to be misleading as to the patient's condition. Incontinence of feces and urine is a sign of danger. If the breathing stops, as much fluid as possible should be removed by lowering the funnel—artificial respiration should be begun at once, and epinephrin or atropia injected hypodermically. The injections should be given every 24 hours for three or four days, and the cerebro-spinal fluid examined each time.

The cerebro-spinal fluid, as a rule, becomes clearer after each injection, but if this clearing up is not attended by a marked improvement in the symptoms, you probably have an effusion into the lateral ventricles which has been walled off by a closure of the foramina from the subarachnoid spaces. In this class of cases the indication is to open the lateral ventricles by a surgical procedure.

In 1,213 cases cited by Flexner in 1909, in which the serum treatment was given, the mortality was a little over 26 per cent. Last year in Savannah, in 22 cases, the results were not very encouraging, but the serum used was prepared for market by an American firm and was used by various physicians. In the City Hospital at Dallas, excluding cases seemingly hopeless, under the use of Flexner's serum the mortality has been reduced to about 10 per cent. in adults, and 6 per cent. in children, and

there have been fewer sequelae, but elsewhere in Texas the results have not been so good.

We should guard carefully against pneumonia by turning the patient frequently from side to side. After the first week we should look out for hydrocephalus, which generally makes itself known by inattention on the part of the patient, increased pulse rate, and a septic rise of temperature. You may have serum sickness about this time.

Patients should be given as much to eat as they will take, and if unconscious it is sometimes necessary to resort to gavage. The prognosis in a posterior basic meningitis or a hydrocephalus is bad, but not absolutely so, as when necessary we may sometimes give relief by passing the needle into the lateral ventricles through the anterior fontanelle in children, or by trephining in adults.

For the relief of the intense headache, morphine has been recommended, but its use has not been very satisfactory. Bromides and chloral hydrate give better results. Bathe at a temperature of 105° or 107° F. for 10 or 15 minutes will oftentimes give a short period of temporary relief. Retention of urine is not uncommon, and this danger should be borne in mind.

In some patients there is a swelling and stiffness in the joints, which should be treated like an acute rheumatism. Stiffness of the neck and Kernig's sign are sometimes persistent, but need cause no alarm if there is marked improvement as to the other symptoms.

Vaccination, using 500,000,000 killed bacteria at the first dose, followed by two doses of 1,000,000,000 at intervals of a week or ten days, used like typhoid vaccine, to produce immunity, has been used and is recommended. Dr. Frost states that "it has been agreed by those best qualified to judge—

1. That the serum when promptly and properly used effects a very substantial reduction in mortality, shortens the course of the disease, and reduces the proportion of disastrous sequelae.

2. That it must be used freely—repeated daily for at least three days in most cases, and as much longer as may be found necessary from observation of clinical signs, and examination of cerebrospinal fluid.

3. That the best results can be obtained

by persons expert in the technique and the principles of the treatment—and conversant with the clinical aspects of the disease."

Bibliography

- Reports Dr. A. Sophian in Dallas (Texas) Morning News.
 W. H. Frost. U. S. P. H. Reports, Vol. XXVII, No. 4.
 P. A. S.
 R. H. Von Ezdorf. U. S. P. H. Reports, Vol. XXVII, No. 8.
 P. A. S.
 Dr. Simon Flexner. The Journal A. M. A., Vol. LIII, No. 18.
 Dr. Abraham Sophian. The Journal A. M. A., Vol. LVIII, No. 12.
 Dr. Henry Koplik. Osler's Mod. Med., Vol. VI.

Discussion on Dr. Travis' Paper

Dr. E. C. Thrash, Atlanta, thought that one of the most important things for their consideration in the study of this disease was the diagnosis, especially in the sporadic cases; if there was an epidemic of the disease, the diagnosis would not offer so many difficulties. This was brought home to him only a few hours ago. Last night he saw a case on whom the diagnosis was first made of meningitis; the diagnosis might be a correct one. The party had been out the night before, had a few drinks; he awakened during the night with a very severe headache which persisted, and on the day following was most severe. The patient tossed about a great deal and could not be made comfortable. He was examined most carefully. There were pains produced when there were movements of his joints, apparently a rheumatic infection. The patient finally passed into a state of semi-coma. He could be aroused by flagellations but not at all by ordinary means. He had every appearance of a man with meningitis. His blood pressure was 100 and there were 2,300 leucocytes. No fluid was found by lumbar puncture. Notwithstanding this it was thought to be a case of meningeal infection. Dr. Thrash saw the case last night or yesterday afternoon. Babinski's sign was absent, there was no opisthotonos but there was soreness in the joints and rigidity of the neck. A second lumbar puncture was made and no fluid withdrawn; they then thought they were dealing with a case of profound toxemia from rheumatism, i. e., a rheumatic toxemia. In this instance the diagnosis was problematical. They must depend upon the reflexes, especially of the eyes, Babinski's sign, the findings in the spinal fluid and the examination of the serum by the microscope. In this way they

would be able to make the diagnosis conclusive. When the fluid was constantly absent they could be led into making a diagnosis of toxemia from other sources.

Dr. W. B. Hardman, Commerce, said there was one point that should be emphasized more in the treatment of cerebrospinal meningitis, i. e., the amount of fluid withdrawn in comparison with the amount of fluid injected. It did not matter so materially how much fluid was injected if it was one-third less than the quantity withdrawn and the results would be a great deal better if this point was kept in mind.

Dr. Selman, said that in many instances the serum would not flow through the needle because it was so very viscid. In doing a resection of the cranium, in an attempt to find the organism, he noted that the fluid was so thick that it would not pass through the needle.

Dr. J. W. Palmer, Ailey, said that the paper was a very complete and instructive one and he had little to add from a clinical standpoint except what he had gleaned from the medical journals. He asked Dr. Travis just how many cases he had treated, and also what kind of an instrument did he use in taking the blood pressure in these cases.

A CLINIC WITH DEAF-MUTE CHILDREN*

R. C. Woodard, M.D., Adel

In presenting these children to you this morning, I do not do so without the sense of criticism, though there are so many deaf-mute children in Georgia that I feel are being neglected, deprived of their full pleasure in life, largely through neglect, that I feel it my duty to show what we have done with these three little girls.

When this little girl was about two years old, we awoke to the realization of the fact that we had as our own a deaf-mute child.

Being a physician myself and having some knowledge of what was being done for the deaf in our State and knowing that the profession offered but little to the congenital deaf child, I began to look around for the best possible aid for my child. Accordingly I went to New York and visited the different clinics and schools

for the deaf, only to find that the same state of affairs prevailed there as did in Georgia. While in New York my attention was called to the Oral School of Mrs. Reno Marguellies, 187th street, where this lady was doing a very great work in teaching her children to talk by the method of lip reading. While studying her school and its history, I found that she was brought into the work very much as I have become interested, that is by having as her own a deaf-mute son. Being convinced that her system was a success and needed as an aid some method by which the hearing might be improved, I accordingly came home and took my child to Dr. Stapler, of Macon, who treated her at intervals for one year. I might add here that this treatment did not begin until my child was about three and one-half years old, as we kept waiting with the hope that Nature and time would relieve her of what seemed to us a permanent deafness.

In November, 1908, I took this child before the Sixth District Medical Society in Macon, where it was demonstrated that after three months' treatment she had a slight hearing. I did not know but few of the physicians present in Macon at that time, though hope that several of them are present this morning, that they may be able to see the change in her condition as noticed at Macon. In case I could have the same audience that I met at Macon I could easily prove that my contentions are true.

After seeing the work of Mrs. Marguellies in New York, and being convinced that the treatment above referred to was worth while, we accordingly began a little school in Macon with a very competent and experienced lady teacher in charge. Thus was begun the work we now propose to demonstrate and try and show to you that these children, who were at one time, apparently, hopelessly deaf, by the aid of aural treatment and oral teaching are now able, after three years, to make their wants and wishes known, almost as readily as the normal child.

At the end of one year in Macon we launched our little school at Ashburn, Ga., the home of the largest little girl, where for various reasons it was more convenient and less expensive. At the end of the second year we took them to my home, where they have been taught since last October.

There is one thing of which I am very positive: That our child could not speak

* Read at meeting of Medical Association of Georgia, Augusta, Ga., April, 1912.

one word at three and one-half years of age, and that she does talk now. As to her hearing, I am sure that at the age of three and one-half it was very poor, indeed, and while her hearing is not perfect now, nor never will be, it is very much improved and far superior to the average deaf-mute child.

At present they are being taught by the lady accompanying them, Miss Laura L. Arbaugh, whose preparation for this work has been very superior, indeed.

It is my purpose to have her demonstrate the work that she is doing for these children, and if it appeals to you as not being a fake, that you direct the children of this class in your several localities along this line. These children are all learning to talk and their hearing has all very much improved. The little girl, the daughter of Dr. Heflin, Rex, Ga., came to us last October not able to speak one word. The largest little girl has had equal training with mine.

The two largest little girls are now doing regular third grade work and a more earnest and attentive little bunch cannot be found in Georgia. It is the plan of Miss Arbaugh to establish a school on the line of the Mrs. Marguellies school, somewhere in Georgia, where she can train these unfortunate children on the line of the most improved methods of teaching the deaf. As to the method of Dr. Stapler, my experience with these children forces me to give it my unqualified endorsement. I know it is not popular and may sound like quackery, though I will venture this assertion: If any man in this audience had a congenital deaf child, he would soon find himself investigating this line of work and in a short time would have his child in this school. We have the children here, we know what they have done, and are doing, and we welcome any reasonable test or question, promising you that we have no "cut and dried" work for them to do, though claim that they will compare very favorably with normal children of same age. Some may claim that I am mistaken, and that my child did hear; to them I will say that I will not claim that my child was entirely deaf, though we thought so; I do claim that her hearing has very much improved and that the only treatment she has ever had was that of Dr. Stapler and this, of course, aided by the training of the children by the teacher in charge. As to the method of lip reading, that is not new,

though so far as I know that is not pressed very much in Georgia.

Dr. Crowter, of the Pennsylvania School for the Deaf, Mt. Airy, Philadelphia, says of lip reading: "With us oral failure means manual failure; that when a child cannot be educated by the proper oral method it is useless to hope for any marked success under any method." In other words, if a child cannot be taught to talk it is useless to try to teach him at all.

A gentleman of my town, who is the father of a deaf-mute son some thirty-five years old, said to me when I first began to have my child taught that I was throwing away my money and when I had done all that I could that my child would still be deaf and dumb. My reply was: I will pursue the course I have taken till convinced of my error if it takes my home.

Now, after some three years, I am convinced that there is great hope for these little fellows and that by the proper aural and oral management that much can be done, and I really believe that these little girls will go on in their work and improve in such a manner that when they are grown it will be hard to believe that at one time they were known as deaf and dumb children.

Since taking up this work I have had numerous inquiries from all sections of the country in regard to the work we are doing, which convinces me that there is great room for the kind of work that we have outlined.

Discussion on Dr. Woodard's Presentation

Dr. C. C. Harrold, Macon, said that one of the patients just presented was as deaf as a post; sometimes he thought the child could hear and then he found that she did not hear. However, she talked one hundred times as much today as she did a year and a half ago. There was wonderful improvement in her hearing.

Dr. Heflin said that his child, which was just presented, was a little over one year old, and her deafness was the result of a fall. She would not now attempt to talk because she was somewhat shy. That she was much improved there was not a shadow of a doubt.

Dr. Avant said that great progress had been made with these children. One or two years ago, when he was in South Carolina, he encountered a class of about

twenty-five deaf-mutes, and it was remarkable to see what they had learned; they seemed to be as well up as the ordinary child. He thought then, and he thought so now, that they should make some effort to get an order for teaching these unfortunates introduced in the State. When a child can see and not hear it was a frightful condition and much effort should be made in their behalf and interest. Let them place their shoulders to the wheel and the law-makers would then be compelled to establish schools in this State for their instruction.

Dr. Combs said that the child's grandparents lived in his town. In January he had occasion to go to Dr. Hefflin's home, and he found the mother giving it its exercises and he noted the great improvement the child had made from October to January; there was a wonderful improvement during these three months.

Dr. M. M. Stapler, of Macon, said that he had brought this boy, Robert Roberson, as a supplement to the clinic. It was a thoroughly established fact that these children were not degenerates. From a close observation, an experience of more than twelve years, based on test classes and results obtained, he felt capable of demonstrating that eighty per cent. of deaf-mutism is due primarily to adenoids, as follows: Adenoids close the eustachian tubes and cause a partial vacuum in the middle ears. Air-pressure is therefore greater on the outside of the tympanic membranes. This forces the ossicular chains inward upon the labyrinth. The stapedius muscles are overcome by the pressure and loses contractile power, after which, there being nothing else to prevent, the footplate of the stapes is forced in upon the labyrinth. This produces the labyrinthitis, which has been found and is unaccounted for in autopsies upon deaf-mutes. When given hearing, deaf-mutes will not talk for two reasons: They have no primary register of words to draw upon, and the speech centers are dormant. Dr. Stapler spoke also of an instrument he had devised for raising the ossicular chain off of the labyrinth in those cases where the fixation by plastic serum and swollen tissue was not too great.

The sooner a hollow bone is opened in acute osteomyelitis, the less will be the destruction of bone.

RESOLUTIONS

Notwithstanding the great progress of medical science and the very general acceptance of the broad humanitarian spirit of our times, we today face the fact that our asylums and prisons are overcrowded and our charitable societies are taxed to their utmost to meet the needs of an ever-growing horde of the unfit, the inefficient. We of the medical profession must recognize in this condition our responsibility and our duty to remedy it by all means in our power.

An eminent medical authority has recently stated that in the last twenty-five years the average age of man has been increased by twelve years and that this increase is due to the progress in medicine—in preventive medicine, in improved hygiene, and in the wonderful advance in therapeutics.

Now the law of Nature—true both for the vegetable and the animal kingdoms—is that the unfit shall be eliminated. Now man in his development is working directly contrary to this great law. Today we have increased the average of human life twelve years, which applies to the unfit equally with the fit. Further, we surround the unfit with every care and attention—even in greater measure than we give to the fit—while we place no restriction upon their reproduction, though like unto the weeds of the field and roadside they multiply with a great abundance.

Today the farmer fully appreciates the need of a wise selection of the best seed to produce the greatest harvest. The same is true of the stock breeder and the bird fancier, and Man is indifferent only to his own race.

In our enthusiasm over the conquest of disease we must not lose sight of the fact that while disease is an evil, it yet has this good, it serves ever to eliminate the unfit who fall so easily to its assault.

The Georgia Medical Society in full recognition of its duty—which is equally the duty of this Association—to limit and restrict this rapidly growing stream of the unfit, do present the following resolutions through its committee and urge their adoption:

Whereas, The recent reports of the Bureau of Census shows that in the United States the defective and criminal classes are multiplying in startling numbers; in the case of the insane, in a ratio over twice

that of the increase in population; and

Whereas, The experience in the past has proved that the plan of segregation, adopted in the care and treatment of these classes, has failed to prevent their rapid increase, through which States are burdened increasingly with the duty and the expense of their care and keep; and

Whereas, It has been proven beyond the question of a doubt that heredity is largely responsible for the increase in the class of defectives and criminals, amounting to eighty per cent. in the entire number. Therefore be it

Resolved, That the Medical Association of Georgia, viewing with well grounded alarm the condition of society, mental, moral and physical, engendered by the great increase of the defective and criminal classes, feel it to be a duty imposed upon it by reason of the position its members occupy as the conservators of the public health, to direct the earnest attention of the citizens of the State to these conditions which in such perilous manner menace their well-being and their welfare.

Resolved, That it is the opinion of the members of the Medical Association of Georgia that the State should enact and place on its statute books a law inhibiting procreation in the defective and criminal classes, in this manner absolutely arresting the flow of degeneracy and developing in the subjects of these classes, so far as possible, mental capacity, standards of morality and physical well-being.

Resolved, That the State in enacting a law inhibiting procreation in the defective and criminal classes shall take heed that in the provisions of the law the inalienable privileges and rights of the individual shall be carefully guarded.

Resolved, That in no sense and under no conditions shall the provisions of the law so enacted be regarded as punitive in character, but they shall be made to accomplish a two-fold duty, that of affording protection to the citizens of the State against the destructive influences ensuing from the uninterrupted flow of degeneracy and becoming a benefaction to the subjects of the defective classes in promoting their mental, moral and physical status and contributing, so far as may be possible, to the performance of their duties as well ordered citizens.

Resolved, That these resolutions be referred to the Committee on Legislation, whose duty it shall be to draft, in consulta-

tion with competent legal authority, a bill inhibiting procreation in the defective and criminal classes, and when duly prepared, the committee shall present the same, on behalf of this Association, to the Legislature of the State, in session, praying in its petition that the same may be enacted into a law and entered as such upon its statute books.

THOMAS J. CHARLTON, Chairman
J. LAWTON HIERS,
GEORGE R. WHITE,

Committee from the Georgia Medical Society of Savannah.

Dr. T. J. Carlton, of Savannah, read this resolution, which was duly seconded:

Dr. E. E. Murphey amended the resolution so that it would be referred to the Committee of Public Policy and Legislation, with the request that it carry out the recommendations contained therein.

Dr. J. M. Hull asked Dr. Carlton what led up to the presentation of such a vital resolution.

Dr. Carlton replied that the medical men in Georgia must keep in advance. So far eight States had adopted a similar resolution. Connecticut had appointed a committee of five, who was authorized to have castrated, under certain conditions, persons who had committed certain crimes; also in those imbeciles with exaggerated sexual tendencies, and also those who were afflicted with diseases of a certain nature as well. He had a case in mind of a man dying of consumption and who also had carcinoma of the liver, flat on his back in bed; yet he impregnated his wife, and seven months after his death the child was born. These were the vicious criminals, and castration in such cases should be promptly performed. Of course the milder cases could not be reached by such an extreme measure. The divine right of man seemed to be the rights of the testicle. The operation advocated was vasectomy in the male and ovariectomy in the female. He felt that they were responsible for the existence of these cases. The clergy wouldn't help them in this work, and it rested with the medical profession to see that this measure was carried out. They must do something to stop the degeneracy and evil that was overflowing the country. Georgia should start this movement and he hoped they would not put this resolution on the shelf. He hoped that the

people would understand its purport and do something for it.

Dr. E. E. Murphey, of Augusta, said that the amendment was to refer the resolution to the Committee on Public Health, and he wished to make an amendment to that amendment, and he moved that the resolution be referred to the Committee on Public Policy and Legislation, with instructions to act. This was seconded.

Dr. J. M. Hull moved that the suggestion contained in Dr. Charlton's resolution be included. This was seconded and carried.

NEWSPAPERS

The fact that reputable medical men do not advertise to any considerable extent in the lay press accounts for their failure to have more influence with the editorial columns of our daily and weekly papers. The exploiters of all sorts of medical frauds are liberal patrons of newspapers, and the patronage that is thus bestowed is not without its effect on the editorial policy pursued by many editors who have a high regard for the almighty dollar. When the bill concerning honest medical advertising was before the Indiana Legislature, one of the prominent editors of the State, who had been importuned by the medical quacks and pretenders for support, in an unguarded moment made the statement that he did not care a cuss how worthy the bill was for the protection of the public if it had a tendency to cut down his advertising income. He bluntly stated that he proposed to protect his advertising patrons, and as his paper is full of the deceptive advertising of so-called medical specialists and various medical frauds, it is easy to understand how powerful the matter of money is in gaining the support of the average newspaper editor. Some of the worst offenders among editors and proprietors of our daily and weekly papers are deacons in churches, who do a good deal of talking about integrity and honesty, and at the Wednesday night prayer meeting lift their voices piously in an appeal for heavenly guidance to do the right thing under any and all circumstances, but who the next morning forget that there is any such thing as honesty in the conduct of the advertising departments of their papers. Surely a man's conscience is warped when he can be a party to the perpetration of what he knows to be a swind-

ling game, and ample evidence has been afforded by the series of articles by Samuel Hopkins Adams and others as to just what the proprietary medicine and quack doctor advertising means.—*Journal Indiana Medical Association.*

EDITORIAL

This issue of the Journal contains the directory of members of the State Association, arranged by counties and societies. Members should preserve this number so as to be able to locate any member of the Association. Likewise it will be of great use to those desiring to send reprints. Our advertisers make use of it in reaching all members with advertising information not found in the columns of the Journal. Requests for this issue have already been made by directory publishers and life insurance companies, and the name of every reputable physician in the State should appear. We are glad that our membership is increasing, but we are not making the strides we should. We have over a hundred more members than we had last year, but we should have a thousand more.

We would call attention to Dr. McArthur's article in this issue and ask that while your name undoubtedly appears, there are other good men in your community who are not members, and a word from you would secure their membership and in addition would secure you a co-worker in scientific medicine that you would not be ashamed of and who would probably be in a position to sometimes assist you materially as a result of his being a member. This is a great work and your assistance is needed. Do you make the same endeavor to secure members for your medical society that you do for your lodge? It is vastly more important. The Councilors and Vice-Councilors will preserve this directory in order to try to secure as members those men whose names do not appear. They cannot see every man, but you can assist them. Will you do it?

An injection of bismuth paste may definitely close a troublesome empyema sinus.

Courvosier's law is rarely broken—enlargement of the gall bladder with pronounced jaundice means neoplasm.

THE JOURNAL OF THE MEDICAL ASSOCIATION OF GEORGIA.

300-302-304 Harison Bldg.

SUBSCRIPTION

PRICE.....ONE DOLLAR PER YEAR

SINGLE COPIES of this calendar year, 15 cents; of the previous calendar year, also 15 cents; two years old, 20 cents; three years old, 25 cents; in other words, 5 cents additional is charged for each year preceding the last calendar year.

REMITTANCES should be made by check, draft, registered letter, money or express order. **Currency should not be sent unless the letter is registered.** Stamps in amounts under one dollar are acceptable.

CHANGE OF ADDRESS notice should give both the old and the new address, and state whether the change is **permanent or temporary.** The change notice must reach us **ten days** in advance of the date of the issue which is to be forwarded to the new address.

WARNING: Pay no money to an agent unless he presents a letter showing authority for making collection.

ADVERTISEMENTS.

Advertising forms go to press eight days in advance of the date of issue. In sending in copy time must be allowed for setting up advertisements and for sending proofs. No proprietary medicines can be advertised until approved by the Council. Advertising rates will be sent on request.

CONTRIBUTIONS.

EXCLUSIVE PUBLICATION: Articles are accepted for publication on condition that they are contributed solely to this journal.

CONTRIBUTIONS TYPEWRITTEN. Authors should have their contributions typewritten—double-space and with ample margin—before submitting them. The expense is small to the author—the satisfaction is great to the editor and printer. We can not promise to return unused manuscript, but try to do so in every instance. Manuscript should not be rolled or folded.

ILLUSTRATIONS: Half-tones and zinc etchings will be furnished by THE JOURNAL when satisfactory photographs or drawings are supplied by the author. Each illustration, table, etc., should bear the author's name on the back. Photographs should be clear and distinct; drawings should be made in black ink on white paper. While we cannot guarantee to return used photographs and drawings, we use our best endeavors to do so after the article is published, if the word "return" is written on the back of each.

ANONYMOUS CONTRIBUTIONS, whether for publications, for information, or in the way of criticism are consigned to the wastebasket unread.

NEWS: Our readers are requested to send us items of news of a medical nature, also **marked** copies of local newspapers containing matters of interest to physicians. We shall be glad to know the name of the sender in every instance.

EDITORIAL

The Chicago Tribune started out well in establishing a department of public health with Dr. W. A. Evans, formerly Commissioner of Health of Chicago, as its editor. The department is run in a most excellent manner, and undoubtedly has been the means of spreading reliable information concerning public health matters. But, as The Journal of the A. M. A. has pointed out, the character of the advertising pages does not keep pace with the character of the editorial pages, and it is a little incon-

sistent to preach one thing in the editorial pages and practice another thing in the advertising department. In one number of the Tribune Dr. Evans published some information concerning the peril in reducing weight, and advised the readers to leave anti-fat remedies severely alone because they are positively dangerous or are quack nostrums. On the opposite side of the same page the impudent fraud Marmola, an alleged anti-fat remedy, was advertised. In another instance Dr. Evans answered a correspondent to the effect that there is no such thing as a blood purifier. But in the advertising pages the Tribune carries the announcement that Kardene will purify the blood. During a threatened epidemic of diphtheria in Chicago, Dr. Evans advised his readers as to the necessity of giving medical attention to every child that showed symptoms of sore throat. He said in particular: "If your child has a sore throat do not trifle with it; do not neglect it; do not attempt to cure it up or cover it up." At that time the Tribune was carrying the advertising for Tonsiline, a sore throat "cure" fraud.

As The Journal of the A. M. A. very pertinently remarks: "These examples of inconsistency between the editorial and advertising departments of a great paper are not given for the purpose of criticising the Chicago Tribune. They are merely quoted for the purpose of showing how impossible it is for even a careful and conscientious newspaper to avoid making itself ridiculous so long as it accepts 'patent medicine' advertising. There can be no effective censorship of nostrum advertising. Whenever a 'patent medicine' is advertised in truthful and unexaggerated language, that 'patent medicine' will go out of existence. Nostrums can flourish only on falsehood and deception. There is no half-way course. The newspaper that accepts 'patent medicine' advertising, even though it confines its acceptance to nostrums of a certain type, may just as well make up its mind that, so far as those products are concerned, it is deceiving its readers and perpetrating a greater or less fraud on its subscribers."—Indiana State Journal.

When removing stones from the gall ducts don't neglect to explore the hepatics—with a probe or, better, a narrow blunt spoon.

MEMBERS

of the

MEDICAL ASSOCIATION OF GEORGIA

Who have paid their dues and subscription in advance.

BALDWIN COUNTY

President—J. W. Mobley.....Milledgeville
 Vice-Pres.—T. M. Hall.....Milledgeville
 Sec.-Treas.—W. F. Tanner.....Milledgeville
 Delegate—W. J. Cranston.....Milledgeville

J. W. Mobley.....	Milledgeville
T. M. Hall.....	" "
E. M. Green.....	" "
L. M. Jones.....	" "
N. P. Walker.....	" "
G. A. Little.....	" "
Y. H. Yarbrough.....	" "
W. J. Cranston.....	" "
B. McH. Cline.....	" "
R. C. Swint.....	" "
L. P. Longino.....	" "
J. I. Garrard.....	" "
T. B. Perry.....	" "
W. F. Tanner.....	" "
G. L. Chapman.....	" "
H. D. Allen.....	" "
W. A. Ellison.....	" "
G. L. Echols.....	" "
J. P. Atkinson.....	" "

BANKS COUNTY

President—V. D. Lockhart.....Maysville
 Sec.-Treas.—J. D. Rice.....Homer
 Delegate—V. D. Lockhart.....Maysville

V. D. Lockhart.....	Maysville
O. N. Hardin.....	R. F. D. No. 1, Homer
J. D. Rice.....	Homer
W. P. Hardin.....	R. F. D., Commercee
M. P. Deadwiler.....	Maysville
W. V. Parramore.....	Alto

BARTOW COUNTY

President—A. T. Calhoun.....Cartersville
 Vice-Pres.—T. Lowry.....Euharlee
 Sec.-Treas.—H. E. Felton.....Cartersville
 Delegate—T. Lowry.....Euharlee

R. E. Adair.....	Cartersville
A. T. Calhoun.....	Cartersville
A. B. Green.....	Cartersville
T. Lowry.....	Euharlee
R. I. Battle.....	Cartersville
J. P. Bowdon.....	Adairsville
C. M. Chamlee.....	Adairsville
W. C. Griffin.....	Cartersville
D. H. Monroe.....	Emerson

BEN HILL COUNTY

President—E. J. Dorminy.....Fitzgerald
 Sec.-Treas.—L. S. Osborne.....Fitzgerald
 D. B. Ware.....Fitzgerald

BERRIEN COUNTY

President—W. L. Patten.....Milltown
 Vice-Pres.—J. V. Talley.....Milltown
 Sec.-Treas.—M. L. Webb.....Lenox
 Delegate—R. C. Woodard.....Adel

P. H. Askew.....	Nashville
R. N. Burch.....	Rays Mill
L. A. Carter.....	Nashville
H. W. Clements.....	Rays Mill
S. G. Ethridge.....	Sparks
C. C. Giddens.....	Adel
F. P. Key.....	Nashville
L. B. Lovett.....	Sparks
W. A. Moore.....	Alapaha
Geo. A. Paulk.....	Alapaha
W. L. Patten.....	Milltown
Louis Smith.....	Milltown
J. V. Talley.....	Milltown
Guy S. Sellman.....	Nashville
R. C. Woodard.....	Adel
M. L. Webb.....	Lenox
J. B. S. Blitch.....	Alapaha

BIBB COUNTY

President—F. M. Cunningham.....Macon
 Vice-Pres.—B. S. Gostin.....Macon
 Sec.-Treas.—W. D. Hereford.....Macon
 Delegates—G. T. Miller.....Macon
 M. M. Stapler.....Macon

C. L. Anderson.....	Macon
J. C. Anderson.....	" "
N. T. Carswell.....	" "
M. A. Clark.....	" "
B. S. Gostin.....	" "
T. H. Hall.....	" "
W. D. Hereford.....	" "
C. C. Harrold.....	" "
Max Jackson.....	" "
F. C. Johnston.....	Walden
A. B. Jemison.....	Macon
W. J. Little.....	" "
J. C. McAfee.....	" "
Henry McHatton.....	" "
G. T. Miller.....	" "
K. P. Moore.....	" "
J. M. Moore.....	" "
J. P. Newman.....	" "

W. C. Pumpelly.....	Macon
Herbert Respass.....	"
J. W. Rodgers.....	"
J. H. Shorter.....	"
M. M. Stapler.....	"
O. H. Weaver.....	"
W. H. Whipple.....	"
W. R. Winchester.....	"
J. R. B. Branch.....	"
E. H. Stovall.....	"
R. B. Barron.....	Grays
W. P. Rushin.....	Macon
H. J. Williams.....	"
J. E. Wright.....	"
G. P. Gostin.....	"
F. L. Webb.....	"
S. B. Palmer.....	"
T. A. Hurley.....	"
E. D. Hope.....	"
A. L. Blalock.....	"
A. P. Kemp.....	"
F. M. Cunningham.....	"
Mary E. McKay.....	"
Orman Daniel.....	"
H. P. Derry.....	"
J. W. Cowart.....	Walden
T. E. Blackshear.....	Macon
T. E. Rogers.....	"
C. H. Richardson, Jr.....	"
I. H. Adams.....	"
W. J. Green.....	Route 5,
Harry Moses.....	"
A. H. Rozar.....	"
S. P. Ousley.....	Crumps Park
J. T. Ross.....	Macon
Eugene Elder.....	"
J. A. Selden.....	"
N. G. Gewinner.....	"

BLUE RIDGE MEDICAL SOCIETY

President—J. S. Tankersley.....Ellijay
 Vice-Pres.—J. M. Danes.....Blue Ridge
 Sec.-Treas.—C. B. Crawford.....Blue Ridge
 Delegate—C. B. Crawford.....Blue Ridge

F. C. Richard.....	Jasper
J. B. Graham.....	Ellijay
J. H. Hendrix.....	Jasper
C. C. Russell.....	Talking Rock
W. V. Russell.....	Ellijay
J. M. Danes.....	Blue Ridge
J. B. Chastain.....	Blue Ridge
C. B. Crawford.....	Blue Ridge
J. S. Tankersley.....	Blue Ridge
W. B. Tate.....	Tate
E. W. Watkins, Jr.....	Ellijay
E. L. Prince.....	Morganton
W. A. Travena.....	Old Fort, Tenn.
A. L. Prince.....	Mineral Bluff
W. H. Weeks.....	Epworth
M. C. McClain.....	Marble Hill

BROOKS COUNTY

President—S. S. Gaulden.....Quitman
 Vice-Pres.—E. L. Jelks.....Quitman
 Sec.-Treas.—J. S. King.....Quitman
 Delegate—S. S. Gaulden.....Quitman

S. S. Gaulden.....	Quitman
--------------------	---------

E. L. Jelks.....	Quitman
J. T. King.....	"
J. T. Roan.....	"
L. A. Felder.....	"
J. R. McMichael.....	"
W. Mathews.....	"
G. D. Dorough.....	"
J. C. Hightower.....	"
A. B. Colvin.....	Route 3,
H. L. Cook.....	Route 5,
M. V. Miller.....	Barney
W. W. Massey.....	Morven
Dr. Ward.....	Route 5, Quitman

BULLOCK COUNTY

President—D. E. McEachern.....Statesboro
 Vice-Pres.—B. B. Jones.....Metter
 Sec.-Treas.—F. F. Floyd.....Statesboro
 Delegate—W. D. Kennedy.....Metter

W. D. Kennedy.....	Metter
W. E. Simmons.....	Metter
B. B. Jones.....	Metter
M. M. Lively.....	Statesboro
R. L. Sample.....	Statesboro
A. J. Mooney.....	Statesboro
F. F. Floyd.....	Statesboro
D. E. McEachern.....	Statesboro
L. W. Williams.....	Statesboro
H. H. Olleff.....	Register
W. D. Woods.....	Aaron
R. L. Cone.....	Groveland
J. M. McElveen.....	Brooklet

BURKE COUNTY

President—C. H. Cox.....Waynesboro
 Vice-Pres.—R. L. Miller.....Waynesboro
 Sec.-Treas.—J. M. Byne.....Waynesboro
 Delegate—R. L. Miller.....Waynesboro

C. H. Cox.....	Waynesboro
E. L. Miller.....	"
H. A. Macaulay.....	"
H. Morton.....	"
L. P. Herrington.....	"
M. O. Fuleher.....	"
C. F. Milner.....	"
J. M. Byne.....	"
W. C. Hatcher.....	R. F. D.,
L. B. Royal.....	Girard
H. F. Bent.....	Midville

BUTTS COUNTY

President—B. F. Aiken.....Jenkinsburg
 Vice-Pres.—H. W. Copeland.....Jackson
 Sec.-Treas.—W. H. Steele.....Jackson

W. H. Steele.....	Jackson
J. Lee Byron.....	Jackson
H. W. Copeland.....	Jackson
J. A. Jarrell.....	Jackson
P. A. Gunter.....	Jenkinsburg
J. E. Woods.....	Jackson
A. F. White.....	Flovilla
J. M. Thaxton.....	Jackson
B. F. Aiken.....	Jenkinsburg
J. W. Harper.....	Jackson
W. J. Waites.....	Flovilla

CARROLL COUNTY

President—M. M. Hallum.....	Carrollton
Vice-Pres.—Homer Boatwright.....	Carrollton
Sec.-Treas.—R. E. Foster.....	Carrollton
Delegate—Homer Boatwright.....	Carrollton
J. L. Lovvorn.....	Bowdon
J. C. Griffies.....	Burwell
H. J. Goodwin.....	Roopville
G. W. Burnett.....	Whitesburg
T. M. Spruell.....	Temple
T. E. Rogers.....	Waco
B. L. Embry.....	Villa Rica
Homer Boatwright.....	Carrollton
H. Matthews.....	Lowell
M. M. Hallum.....	Carrollton
W. L. Fitts.....	Carrollton
J. D. Hamrick.....	Carrollton
J. B. Camp.....	Carrollton
W. H. Malone.....	Mt. Zion
J. C. Brock.....	Carrollton
L. E. Wilson.....	Bowdon
J. A. Martin.....	Carrollton
D. S. Reese.....	Carrollton
C. L. Baskin.....	Temple
B. C. Powell.....	Villa Rica
H. R. Marchman.....	Villa Rica
R. E. Foster.....	Carrollton
W. W. Fitts (honorary).....	Carrollton
O. W. Roberts.....	Carrollton
T. G. Sheets.....	Carrollton
W. A. Aderhold.....	Clem
P. W. Smith.....	Bowdon

CLARKE COUNTY

President—A. C. Holliday.....	Athens
Vice-Pres.—John Gerdine.....	Athens
Sec.-Treas.—M. F. Matthews.....	Athens
Delegate—S. S. Smith.....	Athens
I. H. Goss.....	Athens
Ralph Goss.....	"
S. C. Benedict.....	"
S. H. Benedict.....	"
A. C. Holliday.....	"
H. M. Fullilove.....	"
M. F. Matthews.....	"
L. H. Crow.....	"
S. S. Smith.....	"
F. W. Coile.....	Winterville
W. H. Reynolds.....	Lexington
J. P. Proctor.....	Athens
Dan DuPree.....	"
W. W. Brown.....	"
J. C. McKinney.....	"
J. C. Bloomfield.....	"
Otis H. Johnson.....	"
Edward Coleman.....	"
John Gerdine.....	"

(CHATHAM) GEORGIA MEDICAL SOCIETY

President—V. H. Bassett.....	Savannah
Vice-Pres.—J. L. Jackson.....	Savannah
Sec.-Treas.—A. J. Waring.....	Savannah
Delegates—Herman Hesse.....	Savannah
George R. White.....	Savannah
H. P. Adams.....	Savannah
G. O. Brinkley.....	"

C. Barrow.....	Savannah
W. F. Brunner.....	"
V. H. Bassett.....	"
T. J. Charlton.....	"
J. F. Chisholm.....	"
J. A. Crowther.....	"
J. N. Carter.....	"
E. R. Corson.....	"
St. J. R. deCaradeuc.....	"
M. F. Dunn.....	"
J. W. Daniel.....	"
W. R. Dancy.....	"
J. L. Farmer.....	"
H. W. Hesse.....	"
H. T. Conley.....	"
E. W. Griffin.....	Springfield
J. S. Howkins.....	Savannah
J. L. Hiers.....	"
Jabez Jones.....	"
J. L. Jackson.....	"
G. H. Johnson.....	"
Lawrence Lee.....	"
R. Lattimore.....	"
L. H. Lanier.....	Marlow
H. H. Martin.....	Savannah
R. V. Martin.....	"
W. W. Owens.....	"
W. B. Orear.....	"
S. L. Phillips.....	"
B. S. Purse.....	"
H. Y. Righton.....	"
Chas. Silverman.....	"
W. W. Smith.....	Clio
W. K. Smith.....	Pembroke
M. R. Thomas.....	Savannah
J. K. Train.....	"
Chas. Usher.....	"
J. Weichselbaum.....	"
T. P. Waring.....	"
A. J. Waring.....	"
W. S. Wilson.....	"
A. W. Winders.....	"
G. R. White.....	"
A. B. Cleborne.....	"
R. M. Thomson.....	"
R. S. Reid.....	"
B. H. Gibson.....	"
J. O. Baker.....	"
A. L. R. Avant.....	"
T. W. Causey.....	"
D. E. Dudley.....	"
D. B. Edwards.....	"
R. V. Harris.....	"
H. H. McGee.....	"
W. C. Myers.....	Meldrim
W. A. Norton.....	Savannah
G. M. Norton.....	"
J. M. Sigman.....	"
J. O. Strickland.....	Pembroke
A. A. Morrison.....	Savannah
B. P. Oliveros.....	"
P. S. Clark.....	Darien

COBB COUNTY

President—W. M. Kemp.....	Marietta
Sec.-Treas.—W. H. Perkinson.....	Marietta
Delegate—J. D. Malone.....	Marietta
W. M. Kemp.....	Marietta
C. T. Nolan.....	"
J. D. Malone.....	"
W. E. Benson.....	"

H. V. Reynolds.....	Marietta	W. E. Edwards.....	Cordele
W. H. Perkinson.....	"	M. R. Smith.....	"
E. M. Bailey.....	Aeworth	B. Daniel.....	"
C. W. Burtz.....	Aeworth	J. A. Ward.....	"
J. E. Lester.....	Kennesaw	A. J. Wheelchel.....	"
Robt. Powers.....	Roswell	T. J. McArthur.....	"
J. D. Middlebrooks.....	Powder Springs	J. S. McKenzie.....	"
Chas. Haggard.....	Mableton	T. E. Bradley.....	"

COFFEE COUNTY

President—C. W. Roberts.....	Douglas	J. N. Dorminy.....	Seville
Vice-Pres.—G. M. Ricketson.....	Broxton	A. R. Heyward.....	Warwick
Sec.-Treas.—Quitman Holton.....	Douglas	H. H. Shipp.....	Finlyson
Delegate—John R. Smith.....	Douglas	F. E. Williams.....	Vienna
Chas. W. Roberts.....	Douglas	S. F. Williams.....	Cordele
Gordon Burns.....	Douglas	H. A. Mobley.....	Vienna
G. M. Ricketson.....	Broxton	T. F. Bivings.....	Vienna
I. W. Moorman.....	Ambrose	F. R. Wallace.....	Cordele
B. G. Poer.....	Broxton		
H. C. Wheelchel.....	Douglas		
J. R. Smith.....	Douglas		
G. L. Touchton.....	Douglas		
W. F. Sibbett.....	Douglas		
Quitman Holton.....	Douglas		
T. W. Dorsett.....	Willacoochee		
D. H. Meeks.....	Nieholls		
E. C. Perkins.....	Alma		
C. W. Corbitt.....	Pearson		
Joe Corbitt.....	Pearson		
H. P. Smith.....	Pearson		

COLQUITT COUNTY

President—J. H. Green.....	Hartsfield	F. C. Herring.....	Climax
Vice-Pres.—J. C. Stone.....	Doerun	J. C. Neely.....	Iron City
Sec.-Treas.—J. E. Lanier.....	Moultrie	Logan Berry.....	Faceville
M. D. Staiplin.....	Funston	Wm. Richardson.....	Iron City
W. S. Howell.....	Moultrie	V. Berry.....	Bainbridge
E. Daniel.....	Moultrie	John Spooner.....	Donalsonville
W. L. Jerkins.....	Moultrie	Thomas Chason.....	Donalsonville
C. C. Fletcher.....	Moultrie	N. L. Spengler.....	Donalsonville
J. E. Lanier.....	Moultrie	J. D. Chason.....	Bainbridge
J. H. Green.....	Hartsfield	Gordon Chason.....	Bainbridge
J. A. Summerlin.....	Hartsfield	Geo. T. Clark.....	Bainbridge
J. A. Parsons.....	Hartsfield	R. F. Wheat.....	Amsterdam
J. C. Stone.....	Doerun	S. A. V. Christophine.....	Attapulgus
G. L. Austin.....	Berlin		
R. J. Clower.....	Moultrie		

COWETA COUNTY

President—T. B. Davis.....	Newnan	W. S. Ansley.....	Decatur
Vice-Pres.—A. A. Barge.....	Newnan	E. F. Fincher.....	E. Atlanta
Sec.-Treas.—T. S. Bailey.....	Newnan	W. T. McCurdy.....	Stone Mountain
A. A. Barge.....	Newnan	L. S. Smith.....	Edgewood
T. S. Bailey.....	"	A. R. Watkins.....	Chamblee
T. B. Davis.....	"	Chas. E. Pattillo.....	Decatur
J. C. Jackson.....	"		
T. J. Jones.....	"		
R. D. Lee.....	"		
F. I. Welch.....	"		

CRISP COUNTY

President—A. J. Wheelchel.....	Cordele
Vice-Pres.—W. A. Miller.....	Arabi
Sec.-Treas.—T. E. Bradley.....	Cordele
Delegate—V. O. Harvard.....	Arabi

DECATUR COUNTY

President—N. L. Spengler, Donalsonville	
Vice-Pres.—V. Berry.....	Bainbridge
Sec. Treas.—Gordon Chason.....	Bainbridge
Delegate—J. C. Neely.....	Iron City

DeKALB COUNTY

President—A. R. Watkins.....	Chamblee
Vice-Pres.—L. S. Smith.....	Edgewood
Sec.-Treas.—W. S. Ansley.....	Decatur
Delegate—A. R. Watkins.....	Chamblee

DOUGHERTY COUNTY

President—C. W. Walker.....	Albany
Vice-Pres.—N. E. Benson.....	Albany
Sec.-Treas.—Hugo Robinson.....	Albany

J. D. Redfearn.....	Albany
---------------------	--------

ELBERT COUNTY

President—C. E. Earle.....	Elberton
Vice-Pres.—D. V. Bailey.....	Elberton
Sec.-Treas.—L. P. Eberhart.....	Elberton
Delegate—W. J. Mathews.....	Elberton

210012

F. L. Adams.....	Elberton
J. E. Cole.....	Middleton
C. E. Earle.....	Elberton
L. P. Eberhart.....	Elberton
A. C. Smith.....	Elberton
J. W. Seymour.....	Dewey Rose
O. B. Walker.....	Bowman
W. J. Mathews.....	Elberton
J. E. Johnson.....	Elberton
D. N. Thompson.....	Elberton
D. V. Bailey.....	Elberton
J. A. Dillashaw.....	Bowman
G. C. Pruitt.....	Middleton
A. S. J. Stovall.....	Elberton

EMANUEL COUNTY

President—C. R. Riner.....Summit
 Sec. Treas.—R. C. Franklin.....Graymont

M. F. Mosely.....	Oak Park
J. W. Bowie.....	Summit
L. P. Lane.....	Summit
C. R. Riner.....	Summit
J. H. Chandler.....	Swainsboro
G. L. Smith.....	Swainsboro
E. T. Coleman.....	Graymont
V. E. Franklin.....	Graymont
R. C. Franklin.....	Graymont
L. P. Youmans.....	Swainsboro
M. Abi Massoud.....	Stillmore
R. E. Graham.....	Stillmore

FLOYD COUNTY

President—W. W. Mangum.....Rome
 Vice-Pres.—Geo. B. Smith.....Rome
 Sec. Treas.—W. L. Funkhouser.....Rome
 Delegate—R. H. Wicker.....Rome

J. P. Ballenger.....	Armurchee
J. N. Cheney.....	Silver Creek
J. W. Curry.....	Rome
Wm. DeLay.....	"
W. L. Funkhouser.....	"
T. R. Garlington.....	"
R. M. Gray.....	Curryville
W. P. Harbin.....	Rome
R. M. Harbin.....	"
C. Hamilton.....	"
L. P. Hammond.....	"
Jas. E. Ivey.....	"
W. T. McKenney.....	Cave Spring
R. O. Simmons.....	Rome
W. J. Shaw.....	"
H. A. Turner.....	"
J. C. Watts.....	"
R. H. Wicker.....	"
R. P. Cox.....	"
A. C. Shamblin.....	"
J. L. Garrard.....	"
Geo. B. Smith.....	"
W. W. Mangum.....	"
J. T. McCall.....	"
H. C. Willis.....	"
Frank Cordle.....	Lindale

FORSYTH COUNTY

Sec. Treas.—J. H. Hockenhuil, Cumming

J. H. Hockenhuil.....	Cumming
W. E. Lipscomb.....	"
G. P. Brice.....	"

FRANKLIN COUNTY

President—F. G. Moss.....Royston
 Vice-Pres.—W. W. Cornogg.....Lavonia
 Sec. Treas.—B. T. Smith.....Carnesville
 Delegate—G. W. Whiteside.....Lavonia

W. B. Heller.....	Lavonia
J. R. Sewell.....	Ashland
J. R. Brown.....	Martin
B. T. Smith.....	Carnesville
J. R. Hall.....	Carnesville
B. F. Bond.....	Canon
J. M. Freeman.....	Lavonia
W. W. Cornogg.....	Lavonia
G. N. Parker.....	Carnesville
Geo. F. Bush.....	Ashland
J. H. Terrell.....	Canon
H. W. Birdsong.....	Ashland
G. W. Whiteside.....	Lavonia
F. G. Moss.....	Royston

FULTON COUNTY

President—L. B. Clarke,
 Peters Bldg., Atlanta
 Vice-Pres.—J. E. Paullin,
 Peters Bldg., Atlanta
 Sec. Treas.—H. R. Daly,
 Empire Life Bldg., Atlanta
 Treas.—A. H. Lindorne,
 Candler Bldg., Atlanta

Robin Adair.....	Atlanta
L. Amster.....	"
C. R. Andrews.....	"
W. T. Asher.....	"
Archer Avary.....	"
J. C. Avary.....	"
E. L. Awtry.....	"
J. B. Baird, Sr.....	"
J. B. Baird, Jr.....	"
E. G. Ballenger.....	"
S. T. Barnett.....	"
H. I. Battey.....	"
C. F. Benson.....	"
Marion Benson.....	"
W. T. Bivings.....	"
E. Bates Block.....	"
Roy Blosser.....	"
F. K. Boland.....	"
C. E. Boynton.....	"
M. L. Boyd.....	"
J. N. Brawner.....	"
W. T. Brown.....	"
O. B. Bush.....	"
F. P. Calhoun.....	"
J. L. Campbell.....	"
M. G. Campbell.....	"
W. E. Campbell.....	"
E. C. Cartledge.....	"
W. L. Champion.....	"
L. W. Childs.....	"
L. B. Clarke.....	"
A. H. Bunce.....	"
T. J. Collier.....	"
K. R. Collins.....	"
V. C. Cook.....	"

Geo. D. Couch.....	Hapeville	K. L. Reid.....	Atlanta
E. D. Crawford.....	Atlanta	H. L. Reynolds.....	"
Hansell Crenshaw.....	"	C. A. Rhodes.....	"
W. A. Crowe.....	"	R. B. Ridley, Jr.....	"
C. M. Curtis.....	College Park	W. C. Robinson.....	"
R. R. Daly.....	Atlanta	H. J. Rosenberg.....	"
E. C. Davis.....	"	Roy C. Dunbar.....	"
T. C. Davison.....	"	C. M. Remsen.....	"
A. G. DeLoach.....	"	L. C. Roughlin.....	"
J. S. Derr.....	"	Dan G. Sage.....	"
H. R. Donaldson.....	"	Annie L. Sawyer.....	"
R. T. Dorsey.....	"	W. A. Selman.....	"
J. W. Duncan.....	"	W. F. Shallenberger.....	"
J. G. Earnest.....	"	W. B. Sharpe.....	"
W. N. Edenfield.....	"	Archibald Smith.....	"
A. B. Elkin.....	"	Claude A. Smith.....	"
W. S. Elkin.....	"	J. E. Sommerfield.....	"
J. N. Ellis.....	"	E. J. Spratling.....	"
W. B. Emery.....	"	R. G. Stephens.....	"
L. C. Fischer.....	"	L. P. Stephens.....	"
A. P. Flowers.....	"	A. W. Stirling.....	"
A. L. Fowler.....	"	Cecil Stockard.....	"
L. M. Gaines.....	"	C. W. Strickler.....	"
C. G. Giddings.....	"	Cosby Swanson.....	"
W. L. Gilbert.....	"	G. F. Spearman.....	"
W. S. Goldsmith.....	"	J. D. Thomson.....	"
C. W. Gould.....	"	E. C. Thrash.....	"
E. L. Griffin.....	"	Theodore Toepel.....	"
T. H. Hancock.....	"	Geo. C. Trimble.....	"
W. Z. Holliday.....	"	T. E. Vander Veer.....	"
L. Sage Hardin.....	"	E. Van Goidtsnoven.....	"
H. F. Harris.....	"	G. K. Varden.....	"
E. D. Highsmith.....	"	S. Visanska.....	"
J. H. Hines.....	"	John Wallace.....	"
T. C. Hodge.....	"	J. C. Weaver.....	"
F. G. Hodgson.....	"	W. F. Westmoreland.....	"
Michael Hoke.....	"	J. C. White.....	"
Park Howell.....	"	A. E. Wheeler.....	"
G. P. Huguley.....	"	D. F. Winn.....	"
J. S. Hurt.....	"	J. S. Todd.....	"
J. C. Johnson.....	"	J. F. Denton.....	"
E. G. Jones.....	"	M. B. Hutchins.....	"
F. G. Jones.....	"	Frank Bird.....	"
Willis Jones.....	"	B. H. Wagnon.....	"
W. T. Jones.....	"	B. S. Moore.....	"
W. S. Kendrick.....	"	E. O. Stuckey.....	"
J. P. Kennedy.....	"	J. C. Olmsted.....	"
R. R. Kime.....	"	W. E. Person.....	"
J. O. Kinard.....	"	M. McH. Hull.....	"
J. C. King.....	"		
W. W. Lewis.....	"		
A. H. Lindorme.....	"		
H. M. Lokey.....	"		
T. D. Longino.....	"		
J. S. Liebman.....	"		
J. S. McCard.....	"		
F. W. McRae.....	"		
D. J. Manget.....	"		
A. B. Mason.....	"		
O. H. Matthews.....	"		
S. W. Merritt.....	"		
Hal C. Miller.....	"		
B. H. Minchew.....	Waycross		
G. C. Mizell.....	Atlanta		
C. E. Murphey.....	"		
J. H. Neall.....	"		
W. P. Nicholson.....	"		
G. M. Niles.....	"		
G. H. Noble.....	"		
J. E. Paullin.....	"		
B. E. Pearce.....	"		
G. W. Quillian.....	"		
W. E. Quillian.....	"		

GORDON COUNTY

President—W. B. Floyd.....Plainville
 Vice-Pres.—W. R. Barnett.....Resaca
 Sec.-Treas.—E. O. Shellhorse.....Calhoun
 Delegate—D. J. Borders,
 R. F. D., Calhoun

D. J. Borders.....	Calhoun
J. M. Erwin.....	Calhoun
C. F. McLain.....	Calhoun
E. O. Shellhorse.....	Calhoun
H. L. Erwin.....	Dalton
W. R. Barnett.....	Resaca
W. B. Floyd.....	Plainville
R. L. Rogers.....	Fairmont
G. W. Mills.....	Calhoun
B. W. Kite.....	Resaca

GREENE COUNTY

President—C. O. Copelan.....White Plains
 Sec.-Treas.—E. G. Adams.....Greensboro
 Delegate—J. R. Robins.....Siloam

C. O. Copelan.....White Plains
 E. G. Adams.....Greensboro
 C. C. King.....White Plains
 J. R. Robins.....Siloam
 W. H. Lewis.....Siloam
 J. C. Asbury.....Greensboro
 W. E. Adams.....Greensboro
 J. H. Gheesling.....Greensboro
 C. B. Fluker.....Union Point

HABERSHAM COUNTY

President—W. V. Chandler.....Baldwin
 Vice-Pres.—J. B. Jackson.....Clarksville
 Sec.-Treas.—R. B. Lamb.....Demorest
 Delegate—W. C. Bryant.....Clarksville
 W. V. Chandler.....Baldwin
 J. K. Burns.....Clarksville
 J. B. Jackson.....Clarksville
 J. S. Chambers.....Cornelia
 P. Y. Duckett.....Cornelia
 R. B. Lamb.....Demorest
 E. H. Lamb.....Demorest
 W. C. Bryant.....Route No. 2, Clarksville

HALL COUNTY

President—A. D. White.....Gainesville
 Vice-Pres.—E. P. Ham.....Gainesville
 Sec.-Treas.—E. T. Gibbs.....Gainesville
 B. W. Lockhart.....Lula
 W. R. Barnwell.....Oakwood
 L. R. Bryson.....Gainesville
 E. T. Gibbs.....“
 H. L. Rudolph.....“
 J. B. Rudolph.....“
 J. H. Downey.....“
 A. D. White.....“
 J. H. McClure.....“
 P. E. B. Robinson.....“
 W. C. Kennedy.....Belmont
 O. D. Hall.....Buford
 Dr. Neal.....New Holland

HANCOCK COUNTY

President—R. C. Wiley.....Sparta
 Sec.-Treas.—J. A. Brown.....Sparta
 R. C. Wiley.....Sparta
 C. S. Jernigan.....Sparta
 J. A. Brown.....Sparta

JACKSON COUNTY

President—L. Landers.....Commerce
 Vice-Pres.—E. M. McDonald.....Jefferson
 Sec.-Treas.—J. C. Bennett.....Jefferson
 Delegate—J. A. Bryan.....Pendergrass
 L. C. Allen.....Hoschton
 J. C. Bennett.....Jefferson
 C. O. Brock.....Jefferson
 J. A. Bryan.....Pendergrass

L. G. Hardman.....Commerce
 W. B. Hardman.....Commerce
 F. M. Hubbard.....Commerce
 E. M. McDonald.....Jefferson
 M. F. Nelms.....Commerce
 J. B. Pendergrass.....Jefferson
 L. Sanders.....Commerce
 O. E. Shankle.....Commerce
 L. J. Sharp.....Commerce
 H. P. Quilliau.....Winder

JASPER COUNTY

President—F. S. Belcher.....Monticello
 Vice-Pres.—J. V. Davis.....Monticello
 Sec.-Treas.—C. L. Ridley.....Hillsboro
 Delegate—L. M. Ellis.....Monticello

R. F. Cary.....Monticello
 J. H. Bullard.....Machen
 C. L. Ridley.....Hillsboro
 W. M. Bullard.....Monticello
 L. M. Ellis.....Monticello
 F. S. Belcher.....Monticello
 J. V. Davis.....Monticello

JEFFERSON COUNTY

President—J. W. Pilcher.....Stellaville
 Vice-Pres.—C. H. Raley.....Wrens
 Sec.-Treas.—Geo. L. Carpenter.....Wrens
 Delegate—Geo. L. Carpenter.....Wrens

C. W. Churchill.....Wrens
 J. W. Pilcher.....Stellaville
 L. P. Farmer.....Spread
 D. L. Turner, Jr.....Keysville
 Geo. L. Carpenter.....Wrens
 S. T. R. Revell.....Louisville
 J. B. Barwick.....Blythe

JENKINS COUNTY

President—L. J. Belt.....Millen
 Vice-Pres.—J. L. Kirkendol.....Millen
 Sec.-Treas.—W. E. Rushing.....Millen

L. J. Belt.....Millen
 W. E. Rushing.....“
 R. Y. Lane.....“
 H. A. Jones.....“
 Q. A. Mulkey.....“
 J. L. Kirkendol.....“
 W. H. Sutton.....“

LAURENS COUNTY

President—J. J. Baston.....Dublin
 Vice-Pres.—J. E. New.....Dexter
 Sec.-Treas.—W. C. Thompson.....Dublin
 Delegate—J. E. New.....Dexter

W. R. Brigham.....Dublin
 J. J. Baston.....“
 W. C. Thompson.....“
 Ezra New.....“
 J. M. Page.....“
 J. L. Weddington.....“
 E. B. Claxton.....“
 H. Rushin.....“

L. W. Wiggins.....	Dexter
D. L. Murray.....	Dexter
Roy L. Chappell.....	Dudley
W. C. Sessoms.....	Brewton
S. W. Walker.....	Dublin
J. E. New.....	Dexter
C. A. Hodges.....	Dublin
H. T. Hodges.....	"
G. F. Green (honorary).....	"
L. J. Thomas.....	"
T. H. Hall.....	"
C. B. Manning.....	Lovett
J. L. Linder (honorary).....	Dublin
W. E. Beddingfield.....	Rentz

LOWNDES COUNTY

President—A. Griffin.....	Valdosta
Vice-Pres.—J. C. Wilson.....	Valdosta
Sec.-Treas.—J. M. Smith.....	Valdosta
Delegate—A. G. Little.....	Valdosta

A. Griffin.....	Valdosta
A. G. Little.....	"
T. M. Talbot.....	"
J. C. Wilson.....	"
D. W. Freeman.....	"
J. A. Thomas.....	"
F. H. Thomas.....	"
Geo. Lang.....	"
J. M. Smith.....	"
P. C. Quarterman.....	"
E. P. Quillian.....	R. F. D. No. 2,
G. O. Allen.....	Fargo
W. J. Holton.....	Olympia
T. E. Pennington.....	Naylor
E. J. Smith.....	Hahira
F. F. McNeal.....	Hahira

MACON COUNTY

Sec.-Treas.—Chas. A. Greer.....Oglethorpe

C. H. Richardson.....	Montezuma
G. W. Nelson.....	Marshallville

MADISON COUNTY

President—L. E. Roper.....	Comer
Vice-Pres.—W. D. Gholston.....	Danielsville
Sec.-Treas.—J. L. Baker.....	Carlton
Delegate—A. J. Griffith.....	Comer

J. L. Baker.....	Carlton
L. E. Roper.....	Comer
W. D. Gholston.....	Danielsville
W. M. Burekhalter.....	Comer
J. W. Power.....	Comer
S. B. Little.....	Colbert
G. W. Westbrook.....	R. F. D., Commerce
R. J. Westbrook.....	R. F. D., Commerce

MERIWETHER COUNTY

President—E. B. Terrell.....	Greenville
Vice-Pres.—J. J. Pinkston.....	Greenville
Sec.-Treas.—Pryor W. Fitts.....	Greenville
Delegate—R. B. Gilbert.....	Greenville

R. B. Gilbert.....	Greenville
E. B. Terrell.....	"
J. W. Pinkston.....	"
F. P. Norman.....	"
P. W. Fitts.....	"
N. L. Grant.....	Durand
H. M. Foster.....	Manchester
R. A. Hardaway.....	Luthersville

MONROE COUNTY

President—J. F. Lancaster.....	Forsyth
Vice-Pres.—R. C. Goolsby.....	Forsyth
Sec.-Treas.—J. O. Elrod.....	Forsyth
Delegate—W. J. Smith.....	Julliett

J. F. Lancaster.....	Forsyth
G. L. Alexander.....	"
R. C. Goolsby.....	"
J. O. Elrod.....	"
O. C. Collins (honorary).....	"

MUSCOGEE COUNTY

President—J. M. Crooke.....	Columbus
Vice-Pres.—B. B. Jameson.....	Columbus
Secretary—G. S. Murray.....	Columbus
Delegate—W. L. Cooke.....	Columbus
Treasurer—B. W. Allen.....	Columbus

W. L. Bullard.....	Columbus
J. R. Youmans.....	"
W. L. DesPortes.....	"
Martin Crook.....	"
J. M. Crook.....	"
J. I. Darby.....	"
W. L. Cooke.....	"
C. A. Dexter.....	"
W. T. Gautier.....	"
J. H. McDuffie.....	"
H. S. Munroe.....	"
T. E. Mitchell.....	"
C. L. Williams.....	"
R. P. Glenn.....	"
J. T. Moncrief.....	"
B. W. Allen.....	"
J. S. Murray.....	"
J. C. Woolridge.....	"
J. H. Johnson.....	"
B. B. Jameson.....	"
E. H. Sims.....	"
W. N. Carter.....	"
C. A. Peacock.....	"

McDUFFIE COUNTY

President—Sterling Gibson.....	Thomson
Vice-Pres.—A. J. Matthews.....	Thomson
Sec.-Treas.—B. F. Riley.....	Thomson
Delegate—Z. M. Story.....	Winfield

S. Gibson.....	Thomson
A. J. Matthews.....	Thomson
B. F. Riley.....	Thomson
D. A. Rogers.....	Dearing
H. N. Bussey.....	Thomson
Z. M. Story.....	Winfield

NEWTON COUNTY

President—S. W. Everett.....Almon
 Vice-Pres.—J. H. Randell.....Porterdale
 Sec. Treas.—O. L. Holmes.....Covington
 Delegates—J. H. Randell.....Porterdale
 J. C. Smith.....Mansfield

S. W. Everett.....Almon
 J. H. Randell.....Porterdale
 W. D. Travis.....Covington
 O. L. Holmes.....Covington
 J. T. Gibson.....Porterdale
 B. H. H. Ward.....Oxford
 N. Z. Anderson.....Covington
 W. E. Knight.....Mansfield
 R. L. Hollis.....Hayston
 N. J. Boswell.....Mansfield
 J. C. Smith.....Mansfield

OCONEE COUNTY

President—Jas. T. Elder.....Farmington
 Vice-Pres.—E. H. Kennimer.....Bishop
 Sec. Treas.—Wm. M. White.....Watkinsville
 Delegate—Sam. A. Elder.....High Shoals

J. T. Elder.....Farmington
 E. H. Kennimer.....Bishop
 Wm. M. White.....Watkinsville
 Sam. A. Elder.....High Shoals

OCMULGEE COUNTY

President—J. D. Herrman.....Eastman
 Vice-Pres.—J. J. Stone.....Hawkinsville
 Sec. Treas.—J. C. Wall.....Eastman
 Delegate—T. C. Walker.....Cochran

R. L. Whipple.....Cochran
 T. D. Walker.....Cochran
 C. E. Taylor.....Cochran
 J. B. Morgan.....Cochran
 B. M. Kennon.....McRae
 W. H. Born.....McRae
 R. G. Stone.....Hawkinsville
 J. J. Stone.....Hawkinsville
 E. C. Brown.....Hawkinsville
 E. L. Smith.....Plainfield
 J. K. Moly.....Milan
 J. F. Powell.....Gresston
 O. F. Collum.....Chauncey
 T. H. Nelson.....Alamo
 L. P. Fordham.....Alamo
 J. A. Rolan.....Yonker
 J. W. Neal.....Scotland
 J. D. Herrman.....Eastman
 J. Cox Wall.....Eastman
 A. L. Wilkins.....Eastman
 W. E. Miller.....Eastman

PIKE COUNTY

President—R. A. Mallory.....Concord
 Vice-Pres.—J. A. Corry.....Barnesville
 Sec. Treas.—M. M. Head.....Zebulon
 Delegate—W. Haycock.....Molina

J. C. Beauchamp.....Williamson
 W. L. Beauchamp.....Williamson
 J. N. Anderson.....Barnesville

W. H. Aycock.....Molina
 R. A. Mallory.....Concord
 J. R. Graves.....Zebulon
 I. B. Howard.....Williamson
 C. H. Willis.....Barnesville
 J. A. Corry.....Barnesville
 S. Rumble.....Barnesville
 M. M. Head.....Zebulon
 C. F. Griffith.....Milner
 A. H. Huckaby.....Milner
 W. P. Ellis.....Oakland
 J. M. Rogers.....Barnesville
 J. M. F. Barron.....R. F. D. No. 1, Milner

POLK COUNTY

President—C. V. Wood.....Cedartown
 Vice-Pres.—W. W. Tison.....Cedartown
 Sec. Treas.—H. M. Hall.....Cedartown
 Delegate—H. M. Hall.....Cedartown

J. A. Liddell.....Cedartown
 C. V. Wood.....“
 W. A. Chapman.....“
 J. J. Cooper.....“
 H. M. Hall.....“
 W. W. Tyson.....“
 S. L. Whiteley.....“
 W. G. England.....“
 J. C. Trentham.....R. F. D., “
 C. W. Peek.....R. F. D., “
 J. E. Pennington.....Eson Hill
 J. W. Good.....Cedartown
 W. O. Hitchcock.....Dallas

PUTNAM COUNTY

President—V. H. Taliaferro.....Eatonton
 Vice-Pres.—E. Y. Walker.....Willard
 Sec. Treas.—S. A. Clark.....Eatonton
 Delegate—J. D. Weaver.....Eatonton

S. A. Clark.....Eatonton
 V. H. Taliaferro.....“
 D. L. Thomas.....“
 J. D. Weaver.....“
 E. Y. Walker.....Willard

RANDOLPH COUNTY

President—E. C. McCurdy.....Shellman
 Vice-Pres.—J. H. Hendry.....Cuthbert
 Sec. Treas.—F. G. Barfield.....Cuthbert
 Delegate—F. M. Martin.....Shellman

A. L. Crittenden.....Shellman
 F. G. Barfield.....Cuthbert
 T. F. Harper.....Coleman
 F. M. Martin.....Shellman
 E. C. McCurdy.....Shellman
 G. Y. Moore.....Cuthbert
 F. D. Patterson.....Cuthbert
 F. S. Rogers.....Coleman
 A. F. Weathers.....Shellman
 T. H. Andrews.....Cuthbert
 W. W. Binion.....Benevolence
 J. H. Hendry.....Cuthbert

RICHMOND COUNTY

President—T. D. Coleman.....	Augusta
Vice-Pres.—N. M. Moore.....	Augusta
Sec.-Treas.—W. C. Kellogg.....	Augusta
Delegates—Dr. Caldwell.....	Augusta
Dr. Mulherin.....	Augusta

Jos. E. Allen.....	Augusta
H. J. Baker.....	"
W. W. Battey, Sr.....	"
W. W. Battey, Jr.....	"
G. T. Bernard.....	"
C. A. Blanchard.....	"
H. Brooks.....	"
C. I. Bryans.....	"
J. F. Burdshaw.....	"
T. D. Coleman.....	"
P. P. Comey.....	"
Chas. W. Crane.....	"
W. D. Cutter.....	"
A. A. Davidson.....	"
A. J. Deas.....	"
W. H. Doughty, Jr.....	"
H. J. Eve.....	"
W. H. Goodrich.....	"
W. H. Harison, Jr.....	"
J. H. Honan.....	The Hill,
W. R. Houston.....	"
Geo. T. Horne.....	"
Asbury Hull.....	"
J. M. Hull.....	"
W. D. Jennings, Jr.....	"
J. A. Johnston.....	"
W. C. Kellogg.....	"
A. J. Kilpatrick.....	"
M. S. Levy.....	"
J. R. Littleton.....	"
W. C. Lyle.....	"
H. H. Malone.....	"
A. V. Martin.....	Harlem
H. M. Michel.....	Augusta
K. W. Milligan.....	"
C. J. Montgomery.....	"
N. M. Moore.....	"
W. A. Mulherin.....	"
E. E. Murphey.....	"
T. E. Oertel.....	"
H. N. Page.....	"
C. D. Partridge.....	"
Chas. Patterson.....	"
Wm. T. Price.....	"
Leo Reich.....	"
E. T. Rice.....	"
J. R. Robertson.....	"
W. F. Roseborough.....	"
H. W. Shaw.....	"
A. H. Story.....	"
L. P. Tessier.....	"
G. A. Traylor.....	"
A. C. Wade.....	"
E. A. Wilcox.....	"
G. A. Wilcox.....	"
J. B. Wright.....	"
John C. Wright.....	"
Thos. R. Wright.....	"
J. R. Beall.....	Blythe
F. H. Phillips.....	Harlem
A. W. Wood.....	Harrison

STEWART COUNTY

President—R. L. Grier.....	Lumpkin
Vice-Pres.—J. S. Wimberly.....	Lumpkin
Sec.-Treas.—M. Walton.....	Lumpkin
Delegate—J. M. Kenyon.....	Richland

T. F. Abercrombie.....	Lumpkin
J. O. Baldwin.....	Omaha
A. G. Fort.....	Atlanta
R. L. Grier.....	Lumpkin
J. M. Kenyon.....	Richland
G. G. Lunsford.....	Weston
J. F. Lunsford.....	Preston
M. Walton.....	Lumpkin
J. S. Wimberly.....	R. F. D. No. 4, Lumpkin
A. R. Wright.....	Lumpkin
C. E. Pickett.....	Richland
W. F. McCurdy.....	Richland

SPALDING COUNTY

President—E. R. Anthony.....Griffin
Vice-Pres.— ..—Cal2 emfwyp emfwyp mfw
Sec.-Treas.—J. M. Thomas.....Griffin

G. F. Johnston.....	Griffin
M. F. Carson.....	"
J. T. Nunnally.....	"
J. M. Thomas.....	"
J. S. Wells.....	"
W. H. Austin.....	"
E. R. Anthony.....	"
C. L. Tucker.....	"
W. C. Miles.....	"
T. J. Phillips.....	"
Webb Conn.....	"
W. M. Byne.....	Zetella

STEPHENS COUNTY

President—Jeff Davis.....	Toocoa
Vice-Pres.—J. E. D. Isbell.....	Toocoa
Sec. Treas.—C. L. Ayers.....	Toocoa
Delegate—J. H. Terrell.....	Toocoa

F. M. Lothridge.....	Toccoa
Jeff Davis.....	“
J. H. Terrell.....	“
John Edge.....	“
C. L. Ayers.....	“
W. L. McBeth.....	Avalon
W. H. Parker.....	Mize

TALIAFERRO COUNTY

Sec.-Treas.—John A. Rhodes,
Crawfordsville

John A. Rhodes.....Crawfordsville
L. R. Brown.....Sharon

TAYLOR COUNTY

Sec. Treas.—T. E. Arrington.....Howard

THOMAS COUNTY

President—W. W. Jarrell.....Thomasville
 Vice-Pres.—C. H. Ferguson.....Thomasville
 Sec.-Treas.—H. Ainsworth.....Thomasville
 Delegate—A. D. Little.....Thomasville

A. P. Taylor.....Thomasville
 C. H. Ferguson.....“
 W. W. Jarrell.....“
 A. D. Little.....“
 Harry Ainsworth.....“
 H. A. Vann.....Boston
 S. E. Sanchez.....Barwick
 D. Q. Dallas.....Pavo
 J. N. Izler.....Meigs
 L. E. Morton.....Boston

TERRELL COUNTY

President—J. T. Arnold.....Parrot
 Vice-Pres.—J. H. Lewis.....Dawson
 Sec.-Treas.—O. T. Kenyon.....Dawson
 Delegate—J. G. Dean.....Dawson

Guy Chappell.....Dawson
 W. H. Gardner.....Dawson
 L. Thomas.....Daverel
 J. G. Dean.....Dawson
 J. T. Arnold.....Parrot
 R. E. Bowman.....Bronwood
 L. Lamar.....Dawson
 J. W. Patterson.....Dawson

TIFT COUNTY

President—W. H. Hendricks.....Tifton
 Sec.-Treas.—L. A. Baker.....Tifton
 Delegate—N. Peterson.....Tifton

W. H. Hendricks.....Tifton
 G. W. Julian.....“
 W. T. Smith.....“
 J. M. Price.....“
 J. A. McRae.....“
 N. Peterson.....“
 L. A. Baker.....“
 Irvin Willis.....Omega
 W. E. Tyson.....Chula
 J. H. Hammond.....Enigma

TOOMBS COUNTY

President—M. L. Currie.....Vidalia
 Sec.-Treas.—T. C. Thompson.....Vidalia

J. M. Meadows.....Vidalia
 W. F. Peacock.....“
 L. L. Moye.....“
 V. L. Darby.....“
 M. L. Currie.....“
 T. C. Thompson.....“
 W. W. Odum.....Lyons
 Geo. Gray.....“
 I. E. Aaron.....“
 E. P. Bomar.....“

TRI COUNTY

President—H. L. Carroll.....Babcock
 Vice-Pres.—W. O. Howard.....Leary
 Sec.-Treas.—C. K. Sharp.....Arlington
 Delegate—W. J. Jennings.....Blakely

W. J. Jennings.....Blakely
 P. H. Fitzgerald.....“
 C. R. Barksdale.....“
 J. H. Hand.....“
 W. B. Sandifer.....“
 J. G. Sandifer.....“
 W. O. Howard.....Leary
 J. C. Stewart.....Leary
 J. H. Crozier.....Cedar Springs
 P. H. Keaton.....Kestler
 J. S. Beard.....Edison
 C. K. Sharp.....Arlington
 J. L. Cheshire.....Kestler
 W. E. Saunders.....Arlington
 C. J. Jenkins.....Edison
 C. O. Tye.....Edison
 H. L. Carroll.....Babcock
 E. C. Smith.....Jakin
 T. E. Sheffield.....Cedar Springs
 W. C. Hays.....Colquitt
 J. P. Cook.....Colquitt

TROUP COUNTY

Sec.-Treas.—John Banks.....LaGrange
 H. R. Slack.....LaGrange
 F. M. Ridley, Sr.....“
 F. M. Ridley, Jr.....“
 I. H. Lane.....“
 R. A. Justice.....“
 H. W. Terrell.....“
 C. O. Williams.....West Point
 J. S. Horsley, Sr.....“
 J. S. Horsley, Jr.....“
 J. M. Poer.....“
 R. H. Jenkins.....Hogansville
 B. H. Brock.....Hogansville
 John Banks.....LaGrange

TURNER COUNTY

President—W. L. Story.....Ashburn
 Sec.-Treas.—W. J. Turner.....Ashburn
 Delegate—J. H. Baxter.....Ashburn

WALKER COUNTY

President—J. M. Underwood.....Lafayette
 Vice-Pres.—R. E. Tally.....Lafayette
 Sec.-Treas.—J. H. Hammond.....Lafayette

J. M. Underwood.....Lafayette
 Samuel W. Fariss.....Lafayette
 J. H. Hammond.....Lafayette
 R. E. Tally.....R. F. D., Lafayette
 J. P. McWilliams.....R. F. D., Lafayette
 C. C. Rudieil.....Chickamauga
 J. P. Hunter.....Kensington
 W. D. Rogers.....Kensington
 M. M. Crowder.....R. F. D., Kensington
 J. H. Shields.....Villanow
 M. W. Murphey.....R. F. D., Ringgold
 J. S. Alsobrook.....Rossville

E. M. Jennings.....	Menlo
R. M. Coulter.....	R. F. D., Lafayette
H. E. Hise.....	Rock Spring
D. G. Elder.....	Chickamauga
D. C. Alsobrook.....	Rock Spring
H. M. Barker.....	Flintstone

WARE COUNTY

President—J. C. Rippard.....	Waycross
Vice-Pres.—F. C. Folks.....	Waycross
Sec.-Treas.—T. J. Carswell.....	Waycross
Delegate—W. M. Folks.....	Waycross

J. E. Knight.....	Waycross
R. P. Izlar.....	Waycross
J. L. Walker.....	Waycross
W. P. Williams.....	Blackshear
J. H. O'Quinn.....	Patterson
Dallas Williams.....	Folkston
F. C. Folks.....	Waycross
M. M. Johnson.....	Waycross
J. C. Rippard.....	Waycross
J. J. Beaton.....	Waycross
D. M. Bradley.....	Waycross
T. E. Oden.....	Blackshear
A. Fleming.....	Waycross
H. J. Carswell.....	Kingsland
J. H. Latimer.....	Waycross
T. J. Carswell.....	Waycross
Wm. M. Folks.....	Waycross
D. W. F. Maloy.....	Beach
W. F. Reavis.....	Hoboken
P. P. Lane.....	Waycross
W. R. Moore.....	Blackshear

WARREN COUNTY

President—G. R. Maner.....	Warrenton
Sec.-Treas.—R. D. Nash.....	Norwood
Delegate—G. R. Maner.....	Warrenton

W. W. Pilcher.....	Warrenton
G. R. Maner.....	Warrenton
E. G. Scruggs.....	Warrenton
R. D. Nash.....	Norwood

WAYNE COUNTY

President—J. G. Tuten.....	Jesup
Vice-Pres.—J. L. Tyer.....	Sereven
Sec.-Treas.—E. C. Crummev.....	Jesup
Delegate—J. G. Tuten.....	Jesup

J. G. Tuten.....	Jesup
D. L. Moore.....	Jesup
E. C. Crummev.....	Jesup
J. T. Colvin.....	Odum
I. K. Ogden.....	Odum
W. M. Odum.....	Odum
J. A. Moore.....	Hickox
T. G. Ritch.....	Sereven
J. L. Tyer.....	Sereven

WILKES COUNTY

President—A. W. Simpson.....	Washington
Vice-Pres.—R. J. McNeil.....	Danburg
Sec.-Treas.—O. S. Wood.....	Washington
Delegates—H. M. Sale.....	Tignall
W. B. Wansley.....	Tignall

A. W. Simpson.....	Washington
T. J. Wills.....	Washington
R. A. Simpson.....	Washington
O. S. Wood.....	Washington
J. B. Lewis.....	Washington
R. J. McNeil.....	Danburg
E. P. White.....	Tignall
W. B. Wansley.....	R. F. D., Tignall
E. L. Sturkey.....	Metasville
L. R. Castile.....	Metasville
J. E. Amson.....	R. F. D., Washington
E. B. Reese.....	R. F. D., Rayle

WORTH COUNTY

J. L. Tracy.....	Sylvester
W. C. Tipton.....	Sylvester

NO COUNTY SOCIETY

S. T. Harris.....	Highlands
Aubrey Harper.....	Wray
L. O. Wooten.....	Unadilla
C. T. Holmes.....	Ft. Gaines
Jas. Delamar.....	Hamilton
W. T. Simpson.....	Smithville
H. T. Simpson.....	Smithville
J. H. Ridley.....	Haddock
W. E. Wood.....	Dalton
J. W. Palmer.....	Ailey
M. S. Brown.....	Ft. Valley
D. E. McMaster.....	Tennille

LIST OF NATIONAL MEDICAL SOCIETIES

This information is correct to date of going to press, so far as we have been able to obtain it from the various secretaries. Officers or others are requested to notify us of any errors or required changes. For further information concerning any society address the secretary.

SOCIETY	PRESIDENT	SECRETARY	NEXT ANNUAL MEETING
AMERICAN MEDICAL ASSOCIATION..... American	John B. Murphy, Chicago.....	Alexander R. Craig, 535 Dearborn ave., Chicago.....	Atlantic City, June 4-7, 1912.
Academy of Medicine.....	Alexander R. Craig, Chicago.....	Charles McIntire, Easton, Pa.....	Atlantic City, June, 1912.
Academy of Ophthal. and Oto-Laryng.....	George F. Suker, Chicago.....	Lee M. Francis, 575 Delaware ave., Buffalo.....	Niagara Falls, Aug. 20-22, 1912.
Association of Anatomists.....	Ross G. Harrison, New Haven, Conn.....	E. Carl Huber, Ann Arbor, Mich.....	December, 1912.
Association of Genito-Urinary Surgeons.....	Edward Martin, Philadelphia.....	I. Bentley Squier, 49 E. 49th st., New York.....	Philadelphia, June 7-8, 1912.
Association of Obstetricians and Gyn.....	Xavier O. Werder, Pittsburgh.....	J. G. Grinkle, Cincinnati.....	Toledo, September, 1912.
Assn. of Pathologists and Bacteriologists.....	R. M. Pearce, Philadelphia.....	I. C. Ernst, Harvard Med. School, Boston.....	Philadelphia, April 5-6, 1912.
Association of Railway Surgeons.....	Rhett Goode, Mobile, Ala.....	Louis J. Mitchell, 132 N. Wabash ave., Chicago.....	Chicago, Oct. 16-18, 1912.
Climatological Association.....	A. D. Blackader, Montreal.....	Luy Hinsdale, Hot Springs, Va.....	Hartford, Conn., June 10-12, 1912.
Dermatological Association.....	Grover W. Wende, Buffalo.....	James M. F. Winfield, 47 Halsey st., Brooklyn.....	St. Louis, May 23-25, 1912.
Electro-Therapeutic Association.....	William D. McFee, Haverhill, Mass.....	J. W. Travel, 27 E. 11th st., New York.....	Baltimore, September, 1912.
Gastro-Enterological Association.....	W. B. Cannon, Boston.....	J. W. White, 416 Marlborough st., Boston.....	Atlantic City, June 3-4, 1912.
Gynecological Society.....	Howard A. Kelly, Baltimore.....	Ray Brown, 148 W. 77th st., New York.....	Baltimore, May 24-30, 1912.
Laryngological Association.....	James E. Newcomb, New York.....	Larmon Smith, 44 W. 49th st., New York.....	Atlantic City, May 9-11, 1912.
Larynx, Rhin. and Otol. Society.....	G. Hudson Makuen, Philadelphia.....	Charles G. Wagner, Binghamton, N. Y.....	June, 1912.
Medico-Psychological Association.....	Hubert Work, Pueblo, Colo.....	Alfred R. Allen, 2013 Spruce st., Philadelphia.....	Atlantic City, N. J., May 28-31, 1912.
Neurological Association.....	William N. Bullard, Boston.....	N. M. Sweet, 1205 Spruce st., Philadelphia.....	Boston, Mass., May 30-June 1.
Ophthalmological Society.....	Edward Jackson, Denver.....	J. R. Fitch, 209 East ave., Rochester, N. Y.....	Atlantic City, June 12-13, 1912.
Orthopedic Association.....	Virgil P. Gibney, New York City.....	James F. McKernon, 62 W. 52d st., New York.....	Atlantic City, May 30-June 1.
Otological Society.....	Edw. B. Dench, New York.....	Leo M. Kober, 1819 Q st., Washington, D. C.....	Atlantic City, June 10-11.
Physicians, Association of.....	Augustus Caille, New York.....	A. J. Carlson, University of Chicago, Chicago.....	Hot Springs, Va., May 29-31, 1912.
Physiological Society.....	J. George Adami, Montreal.....	S. C. Adams, 1 Dupont Circle, Washington, D. C.....	Atlantic City, May 7-8, 1912.
Proctologic Society.....	John L. Jelks, Memphis, Tenn.....	J. H. Adler, Jr., 1610 Arch st., Philadelphia.....	Cleveland, O., Dec. 26-28, 1912.
Public Health Association.....	John N. Hurty, Indianapolis, Ind.....	V. C. Woodward, 1766 Lanier pl., Washington, D. C.....	Atlantic City, June 4-5, 1912.
Roentgen Ray Society.....	Frederick H. Baetjer, Baltimore, Md.....	Henry K. Pancoast, 4238 Pine st., Philadelphia.....	Washington, September, 1912.
Society of Tropical Medicine.....	Jos. H. White, U. S. P. H. & M. H. S.....	John M. Swan, 457 Park ave., Rochester, N. Y.....	Niagara Falls, N. Y., Sept., 1912.
Surgical Association.....	Arpad G. Gerster, New York.....	Robert G. LeConte, 1530 Locust st., Philadelphia.....	Atlantic City, June 3, 1912.
Therapeutic Society.....	Alex. D. Blackader, Montreal, Que.....	I. P. Barnes, 212 Maryland ave., Washington, D. C.....	Montreal, May 29-31, 1912.
Urological Association.....	L. E. Schmidt, Chicago.....	I. A. Fowler, Teh Cumberland, Washington, D. C.....	Montreal, May 31-June 1, 1912.
Assn. of Military Surgeons of the U. S.....	C. P. Wertenbaker, U. S. P. H. & M. H. S.....	J. Lynch, 716 Union Trust Bldg., Washington, D. C.....	New York City, April 2-4, 1912.
Congress Am. Phys. and Surgs.....	Wm. C. Gorgas, Ancon, C. Z.....	W. R. Steiner, 4 Trinity st., Hartford, Conn.....	Baltimore, 1912.
Conference of State and Prov. Bds. of N.A.....	W. C. Woodward, Washington, D. C.....	I. M. Bracken, Capitol Bldg., St. Paul, Minn.....	Washington, D. C., May, 1913.
Med. Association of the Southwest.....	A. L. Blesh, Oklahoma City, Okla.....	Fred H. Clark, El Reno, Oklahoma.....	Washington, D. C., Sept. 20-21, 1912.
Mississippi Valley Medical Association.....	Louis Frank, Louisville, Ky.....	Henry E. Tukey, 111 W. Ky. st., Louisville, Ky.....	Hot Springs, Ark., Oct. 8-10, 1912.
Missouri Valley Medical Society of the.....	John M. Bell, St. Joseph, Mo.....	Charles Wood Fasset, St. Joseph, Mo.....	Colfax Springs, Ia., March 21-22, '12.
Nat. Assn. for Study and Prev. of Tuberc.....	Maryek P. Ravenel, Madison, Wis.....	A. B. Jacobs, 11 Mt. Vernon pl., Baltimore.....	May, 1912.
Nat. Assn. for Study of Epilepsy.....	William T. Shanahan, Sonoma, N. Y.....	I. F. Munson, Sonoma, N. Y.....	Vinceland, N. J., June 3, 1912.
Southern Medical Association.....	Jas. M. Jackson, Jr., Miami, Fla.....	Seale Harris, Mobile, Ala.....	Jacksonville, Fla., 1912.
Southern Surgical and Gyn. Association.....	J. M. T. Finney, Baltimore.....	W. D. Haggard, Jr., 148 8th Ave. N., Nashville.....	Old Point Comfort, Va., 1912.
Western Surgical and Gyn. Association.....	L. L. McArthur, Chicago.....	Arthur T. Mann, Donaldson Bldg., Minneapolis.....	Cincinnati, 1912.

RATES FOR REPRINTS

100.....	\$1.00 per page
200.....	1.25 per page
500.....	1.50 per page
1000.....	2.00 per page

Covers to count as four pages when ordered.

The Journal is owned and published by the Association, and all profit goes to make it better. Each member of the Association is financially interested in the Journal to the same extent as every other member, and each member is rightfully anxious for the financial success of the publication.

The greater this financial success, the greater the practical value can be made to the individual member, and hence the greater the value as an advertising medium.

Our advertisers, by their patronage, help to support the Journal, and make its successful publication possible. In return they expect, and rightfully, a fair return for their money. Every dollar spent by a member of the Medical Association of Georgia with advertisers in our Journal, in preference to non-advertisers, is a dollar spent in advancing his own personal advantage, for he has contributed something indirectly to the betterment of his own property.

The Journal cannot exist without the advertisers and their good will.

The advertisers cannot continue in business without the patronage of the medical profession.

The medical man cannot continue in business without the supplies for sale by the Advertisers.

The interests of all are identical—the profession must depend upon the manufacturers, etc. The manufacturers, drug houses, etc, must depend upon the more progressive and more successful physicians. The interests of both are best served through the official Medical Journal—the Journal published by the profession in its own best interests, scientifically and ethically.

ADVERTISING RATES

1	Page	1 year.....	\$150.00
1/2	"	1 "	87.50
1/4	"	1 "	50.00
1/8	"	1 "	33.00
1/16	"	1 "	25.00
1	Page	6 months.....	87.50
1/2	"	6 "	50.00
1/4	"	6 "	33.00
1/8	"	6 "	25.00
1/16	"	6 "	20.00
1	Page	3 Months.....	50.00
1/2	"	3 "	33.00
1/4	"	3 "	15.00
1/8	"	3 "	10.00
1	Page	1 month.....	25.00
1/2	"	1 "	15.00
1/4	"	1 "	10.00
1/8	"	1 "	7.50

These rates do not apply to cover pages, space next to reading matter, or matter requiring to be reset.

Hypodermatic Tablets that will Justify Your Confidence.

HYPODERMATIC TABLETS are essentially emergency agents. We never lose sight of that fact. We feel the responsibility that we assume in producing such tablets. We spare no pains to make our tablets trustworthy.

Our hypodermatic tablets are molded with the utmost care, and only materials are used which have been rigidly tested. In every tablet of our manufacture the active component is present in the precise amount stated on the label.

Our hypodermatic tablets dissolve quickly and completely; they do not merely disintegrate. In a very few seconds you have, ready to inject, a perfect solution of which every minim is a minim of activity. There is no delay—no uncertainty.

Hypodermatic tablets cannot be judged by outward signs. A dozen tablets from a dozen sources may look exactly alike. But mere appearance counts for little. *Content and solubility*—these are the things of paramount importance.

Take a hypodermatic tablet of sparteine sulphate, $\frac{1}{4}$ -grain, for instance. The label on the vial tells you the tablet contains that drug in that amount. *But does it?* As a busy practitioner you cannot take the time to make an analysis—you are forced to accept the word of the maker that each tablet contains what the label says it contains.

To test a hypodermatic tablet for solubility is a very simple matter. But remember that merely to fly into pieces when thrown into water is not the requirement. Many tablets do that, the fine undissolved particles settling to the bottom. In such a case the supernatant liquid which you draw into your syringe is not the solution you believe it to be, nor can it be expected to yield the desired results.

Use our hypodermatic tablets. Get results—get them promptly.

TUBES OF 25—NOT 20.

Parke, Davis & Co.'s hypodermatic tablets are supplied in tubes of 25. Certain competing tablets are marketed in tubes of 20. When you specify "Parke, Davis & Co." on your orders you get 25 tablets to a tube, not 20.

Home Offices and Laboratories,
Detroit, Michigan.

Parke, Davis & Co.

The Journal of the Medical Association of Georgia



Published Monthly under Direction of the Council

Editorial and Business Office—300, 302 and 304 Harison Building.

Subscription Price, \$1.00

Entered as second-class matter, August 4, 1911, at the Post Office at Augusta, Ga., under the Act of March 3, 1879.

Vol. II

AUGUSTA, GA., JULY, 1912

No. 3

CONTENTS AND DIGEST.

ORIGINAL ARTICLES

Conservative Treatment of Gun Shot Wounds of the Extremities. By Chas. L. Ridley, M.D., Hillsboro.....	67
Typhoid Vaccine. By J. W. Palmer, M.D., Ailey.....	69
Intestinal Sand. By N. M. Moore, M.D., Augusta.....	71
Discussion on Dr. Moore's Paper.....	72
Flotsam and Jetsam from a Medical Standpoint. By B. P. Oliveros, M.D., Savannah.....	73
Ligation of the Typhoid Vessels in Exophthalmic Goiter. By Wm. S. Goldsmith, M.D., Atlanta.....	75
A Consideration of the Subject of Goiter with Especial Reference to Surgical Treatment. By Edward G. Jones, M.D., Atlanta	76
Discussion on Drs. Goldsmith and Jones' Papers.....	82

EDITORIALS

Resolution	83
Examination	83
Exhibition of X-ray Plates.....	86

PEDIATRICS

A Request	87
Some Remarks on Infant Feeding. By H. McHatton, M.D., Macon	87
The Milk of Pregnant Mothers Not Poisonous to Her Suckling Offspring. By W. A. Mulherin, M.D., Augusta.....	88
Dr. Jacobi's A. M. A. Address.....	89
Sodium Benzoate in Artificially-Fed Infants.....	93
Colon Irrigation; the Short vs. the Long Tube.....	94

TUBERCULOSIS

The Status of the Anti-Tubercular Crusade in Georgia. By T. E. Oertel, M.D., Augusta.....	95
Tincture of Iodine Applications to the Peritoneum for Tubercular Peritonitis	96
A Diagnostic Tender Spot in Pulmonary Tuberculosis.....	96

MISCELLANEOUS

New Members	82
The Owen Bill.....	94

UNIVERSITY OF GEORGIA

COLLEGE OF MEDICINE

Augusta, Ga.

W. H. DOUGHTY, Jr., M.D., Dean.

W. C. LYLE, M.D., Vice-Dean.

L. W. FARGO, M.D., Registrar.

The 81st Annual Session of this College begins September 16, 1912.

Four years graded course of eight months each.

Didactic and recitation system of instruction.

Full time teachers in primary branches.

Well equipped laboratories.

Ample facilities for clinical teaching.

Three large Hospitals, and Out-Patient Clinic and Dispensary under exclusive Control of the Faculty.

Entrance requirements same as for literary degree—Fourteen units.

For further information, address

An Integral Part

THE REGISTRAR

of the

College of Medicine

University System

AUGUSTA, GEORGIA.

OFFICERS

President.....	W. W. PILCHER, M.D., Warrenton
First Vice-Pres.....	J. W. PALMER, M.D., Ailey
Second Vice-Pres.....	T. H. HALL, M.D., Macon
Sec. Treas.....	W. C. LYLE, M.D., Augusta

COUNCILORS

First Dist.—J. Lawton Hiers, M.D.....	Savannah
Second Dist.—Gordon Chason, M.D.....	Bainbridge
Third Dist.—V. O. Harvard, M.D.....	Arabi
Fourth Dist.—C. L. Williams, M.D.....	Columbus
Fifth Dist.—J. N. Ellis, M.D.....	Atlanta
Sixth Dist.—J. A. Combs, M.D.....	Locust Grove
Seventh Dist.—W. P. Harbin, M.D.....	Rome
Eighth Dist.—I. H. Goss, M.D.....	Athens
Ninth Dist.—W. B. Hardman, M.D.....	Commerce
Tenth Dist.—W. J. Cranston, M.D.....	Milledgeville
Eleventh Dist.—A. G. Little, M.D.....	Valdosta
Twelfth Dist.—E. T. Coleman, M.D.....	Graymont

VICE-COUNCILORS

First Dist.—A. J. Mooney, M.D.....	Statesboro
Second Dist.—C. K. Sharpe, M.D.....	Arlington
Third Dist.—A. G. Crittenden, M.D.....	Shellman
Fourth Dist.—T. S. Bailey, M.D.....	Newnan
Fifth Dist.—F. K. Boland, M.D.....	Atlanta
Sixth Dist.—R. H. Stovall, M.D.....	Macon
Seventh Dist.—J. H. Hammond, M.D.....	LaFayette
Eighth Dist.—E. G. Adams, M.D.....	Greensboro
Ninth Dist.—J. S. Tankersley, M.D.....	Ellijay
Tenth Dist.—G. L. Carpenter, M.D.....	Wrens
Eleventh Dist.—J. G. Tuten, M.D.....	Jesup
Twelfth Dist.—M. L. Currie, M.D.....	Vidalia

STANDING COMMITTEES**Scientific Work**

E. E. Murphy, M.D., Chairman.....	Augusta
V. H. Bassett, M.D.....	Savannah
W. C. Lyle, M.D., ex-officio.....	Augusta

Medical Defense

M. A. Clark, M.D., Chairman.....	Macon
J. N. Ellis, M.D.....	Atlanta
E. T. Coleman, M.D.....	Graymont
J. G. Dean, M.D.....	Dawson
E. G. Jones, M.D.....	Atlanta

Organization

T. J. McArthur, M.D., Chairman.....	Cordele
G. R. White, M.D.....	Savannah
W. B. Hardman, M.D.....	Commerce

Public Policy and Legislation

J. R. Littleton, M.D., Chairman.....	Augusta
W. L. Champion, M.D.....	Atlanta
C. C. Harrold, M.D.....	Macon
President and Secretary, ex-officio	

Necrology

V. D. Lockhart, M.D., Chairman.....	Maysville
W. B. Emery, M.D.....	Atlanta
S. S. Smith, M.D.....	Athens
M. F. Carson, M.D.....	Griffin
J. M. Hull, M.D.....	Augusta

Arrangements

(Committee to be selected by the Chatham County Society)

Delegates to American Medical Association

W. H. Doughty, M.D.....	Augusta
E. G. Ballenger, M.D. (alternate).....	Atlanta
T. J. Charlton, M.D.....	Savannah
T. R. Wright, M.D. (alternate).....	Augusta

COLLABORATORS**History of Medicine**

J. B. Baird, Sr., M.D.....	Atlanta
L. G. Hardman, M.D.....	Commerce
T. R. Wright, M.D.....	Augusta

Medicine

W. W. Jarrell, M.D.....	Thomasville
Ralston Lattimore, M.D.....	Savannah
Thos. D. Coleman, M.D.....	Augusta

Tuberculosis

C. H. Richardson, M.D.....	Montezuma
J. H. Hammond, M.D.....	LaFayette
T. E. Oertel, M.D.....	Augusta

Pellagra

G. M. Niles, M.D.....	Atlanta
E. M. Green, M.D.....	Milledgeville
N. M. Moore, M.D.....	Augusta

Nervous and Mental Diseases

L. M. Gaines, M.D.....	Atlanta
E. T. Gibbs, M.D.....	Gainesville
W. R. Houston, M.D.....	Augusta

Pediatrics

W. Z. Holliday, M.D.....	Atlanta
M. A. Clark, M.D.....	Macon
W. A. Mulherin, M.D.....	Augusta

Public Health

E. C. Benedict, M.D.....	Athens
H. F. Harris, M.D.....	Atlanta
E. E. Murphy, M.D.....	Augusta

Surgery

W. F. Westmoreland, M.D.....	Atlanta
J. R. B. Branch, M.D.....	Macon
W. H. Doughty, Jr., M.D.....	Augusta

Orthopedics

H. J. Williams, M.D.....	Macon
Michael Hoke, M.D.....	Atlanta
H. M. Michel, M.D.....	Augusta

Genito-Urinary and Syphilis

J. L. Farmer, M.D.....	Savannah
W. L. Champion, M.D.....	Atlanta
H. W. Shaw, M.D.....	Augusta

Obstetrics

H. Mellatton, M.D.....	Macon
R. L. Miller, M.D.....	Waynesboro
A. J. Kilpatrick, M.D.....	Augusta

Gynecology

E. G. Jones, M.D.....	Atlanta
R. P. Glenn, M.D.....	Columbus
W. W. Battey, Jr., M.D.....	Augusta

Eye, Ear, Nose and Throat

F. P. Calhoun, M.D.....	Atlanta
H. H. Martin, M.D.....	Savannah
W. C. Lyle, M.D.....	Augusta

Roentgenology

E. R. Corson, M.D.....	Savannah
J. S. Derr, M.D.....	Atlanta
C. W. Crane, M.D.....	Augusta

Anaesthesias

T. J. Collier, M.D.....	Atlanta
Chas. Usher, M.D.....	Savannah
M. S. Levy, M.D.....	Augusta

Laboratories

K. R. Collins, M.D.....	Atlanta
V. H. Bassett, M.D.....	Savannah
Everard Wilcox, M.D.....	Augusta

DISTRICT SOCIETIES

DISTRICT	PRESIDENT	SECRETARY
First	E. T. Coleman.....Graymont	Chas. Usher.....Savannah
Second	Hugo Robinson.....Albany	F. M. Martin.....Shellman
Third	C. A. Greer.....Oglethorpe	M. R. Smith.....Cordele
Fourth	H. J. Goodwin.....Roooville	Homer Boatright.....Carrollton
Fifth	W. D. Travis.....Covington	W. S. Ansley.....Decatur
Sixth	W. J. Little.....Macon	I. H. Adams.....Macon
Seventh	A. B. Greene.....Cartersville	T. Lowry.....Euharlee
Eighth	T. J. Wills.....Washington	D. H. DuPree.....Athens
Ninth	V. D. Lockhart.....Maysville	A. D. White.....Gainesville
Tenth	J. R. Beall.....Blythe	G. A. Traylor.....Augusta
Eleventh	H. C. Welchel.....Douglas	T. J. Carswell.....Waycross
Twelfth	(New District, not yet organized.)	

COUNTY SOCIETIES

COUNTY	PRESIDENT	SECRETARY
Baldwin	J. W. Mobley.....Milledgeville	W. F. Tanner.....Milledgeville
Banks	V. D. Lockhart.....Maysville	J. D. Rice.....Homer
Bartow	A. T. Calhoun.....Cartersville	H. E. Felton.....Cartersville
Ben Hill	E. J. Dorminy.....Fitzgerald	L. S. Osborne.....Fitzgerald
Bibb	F. M. Cunningham.....Macon	W. D. Hereford.....Macon
Blue Ridge	S. S. Tankersley.....Ellijay	C. B. Crawford.....Blue Ridge
Brooks	S. S. Galuden.....Quitman	J. S. King.....Quitman
Bulloch	D. E. McEachern.....Statesboro	F. F. Floyd.....Statesboro
Burke	C. H. Cox.....Waynesboro	J. M. Byne.....Waynesboro
Butts	B. F. Aiken.....Jenkins	W. H. Steele.....Jackson
Carroll	M. M. Hallum.....Carrollton	R. E. Foster.....Carrollton
Chatham	V. H. Bassett.....Savannah	A. J. Waring.....Savannah
Clarke	A. C. Holliday.....Athens	M. F. Matthews.....Athens
Cobb	W. M. Kemp.....Marietta	W. H. Perkinson.....Marietta
Coffee	C. W. Roberts.....Douglas	Quitman Holton.....Douglas
Colquitt	J. H. Green.....Hartsfield	J. E. Lanier.....Moultrie
Coweta	T. B. Davis.....Newnan	I. S. Bailey.....Newnan
Crisp	A. J. Welchel.....Cordele	T. E. Bradley.....Cordele
Decatur	N. L. Spengler.....Donalsonville	Gordon Chason.....Bainbridge
DeKalb	A. R. Watkins.....Chamblee	W. S. Ansley.....Decatur
Dougherty	C. W. Walker.....Albany	Hugo Robinson.....Albany
Elbert	C. E. Earle.....Elberton	L. P. Eberhart.....Elberton
Emanuel	C. R. Riner.....Summit	R. C. Franklin.....Graymont
Floyd	W. W. Mangum.....Rome	W. L. Funkhouser.....Rome
Forsyth	F. G. Moss.....Royston	J. H. Hockenhull.....Cumming
Franklin	L. B. Clarke.....Atlanta	B. T. Smith.....Carnesville
Fulton	W. B. Floyd.....Plainville	R. R. Daly.....Atlanta
Gordon	C. O. Copelan.....White Plains	E. O. Shellhorse.....Calhoun
Greene	W. V. Chandler.....Baldwin	E. G. Adams.....Greensboro
Habersham	A. D. White.....Gainesville	R. B. Lamb.....Demorest
Hall	R. C. Wiley.....Sparta	E. T. Gibbs.....Gainesville
Hancock	L. Landers.....Commerce	J. A. Brown.....Sparta
Jackson	F. S. Belcher.....Monticell	J. C. Bennett.....Jefferson
Jasper	J. W. Pilcher.....Stellaville	C. L. Ridley.....Hill'sboro
Jefferson	L. J. Belt.....Milen	G. L. Carpenter.....Wrens
Jenkins	J. J. Baston.....Dublin	W. E. Rushing.....Milen
Laurens	A. Griffin.....Valdosta	W. C. Thompson.....Dublin
Lowndes	C. H. Richardson.....Montezuma	J. M. Smith.....Valdosta
Macon	L. E. Roper.....Comer	C. A. Greer.....Oglethorpe
Madison	E. B. Terrell.....Greenville	J. L. Baker.....Carlton
Meriwether	J. F. Lancaster.....Forsyth	P. W. Fitts.....Greenville
Monroe	J. M. Crooke.....Columbus	J. O. Elrod.....Forsyth
Muscogee	Sterling Gibson.....Thomson	G. S. Murray.....Columbus
McDuffie	S. W. Everett.....Almon	B. F. Riley.....Thomson
Newton	J. T. Elder.....Farmington	O. L. Holmes.....Covington
Oconee	J. D. Herrman.....Eastman	W. M. White.....Watkinsville
Ocmulgee	R. A. Mallory.....Concord	J. C. Wall.....Eastman
Pike	C. V. Wood.....Cedartown	M. M. Head.....Zebulon
Putnam	V. H. Taliaferro.....Eatonton	H. M. Hall.....Cedartown
Randolph	E. C. McCurdy.....Shellman	S. A. Clark.....Eatonton
Richmond	T. D. Coleman.....Augusta	F. G. Barfield.....Cuthbert
Spalding	E. R. Anthony.....Griffin	W. C. Kellogg.....Augusta
Stephens	Jeff Davis.....Toccoa	J. M. Thomas.....Griffin
Stewart	R. L. Grier.....Lumpkin	C. L. Ayers.....Toccoa
Taliaferro	J. A. Rhodes.....Crawfordville	M. Walton.....Lumpkin
Terrell	J. T. Arnold.....Parrot	T. R. Brown.....Sharon
Thomas	W. W. Jarrell.....Thomasville	C. T. Kenyon.....Dawson
Tift	W. H. Hendricks.....Tifton	Harry Ainsworth.....Thomasville
Toombs	J. M. Meadows.....Vidalia	L. A. Baker.....Tifton
Tri	H. L. Carroll.....Babcock	T. C. Thompson.....Vidalia
Troup	F. M. Ridley, Jr.....LaGrange	C. K. Sharp.....Arlington
Walker	J. M. Underwood.....Lafayette	John Banks.....LaGrange
Ware	J. C. Rippard.....Waycross	J. H. Hammond.....Lafayette
Warren	G. R. Maner.....Warrenton	T. J. Carswell.....Waycross
Wayne	J. G. Tuten.....Jesup	R. D. Nash.....Norwood
Wilkes	A. W. Simpson.....Washington	E. C. Crummeey.....Jesup
Worth	W. C. Tipton.....Sylvester	O. S. Wood.....Washington
		J. L. Tracy.....Sylvester

Journal of the Medical Association of Georgia

W. C. LYLE, M.D., Editor - Augusta, Georgia

CONSERVATIVE TREATMENT OF GUN SHOT WOUNDS OF THE EXTREMITIES*

Chas. L. Ridley, M.D., Hillsboro

Believing that we are often too hasty in amputating in gun shot wounds of the extremities, I wish to bring this subject before the Association with a report of a few cases treated by my preceptor and myself. The results obtained in these cases convince me that though these patients suffered extensive wounds, which on first sight would warrant amputation, yet they recovered when carefully attended.

It is always easier from the doctor's point of view to amputate at once than to care for one of these patients. Frequent dressings are necessary, and occasionally a secondary operation is required for the removal of necrotic bone. In this day the amputation of a limb is no surgical feat of which we may boast, it is easily and quickly done. A few after dressings, as a rule, is all that is necessary to complete the deformity.

The chief hindrance to the successful treatment of these wounds has been the lack of an apparatus that would keep the parts in adjustment for a sufficient time to heal. The splint designed by Dr. J. T. Garland will do this and the limb may be kept perfectly straight for months with complete exposure of the wound.

This splint may be made of cotton ties or any light piece of iron, the ends being left long enough to fasten firmly in plaster. The middle portion, or that portion over the wound is bowed outward so that the wound is exposed and to have plenty of room for dressing. The method of applying this splint will be more fully explained later.

With the idea that almost any kind of limb is better than no limb at all I always endeavor to prevent amputation. It matters not if the bones be extensively fractured or if several inches be absolutely shot away, bone reproduces itself the same as other tissues, just a little more slowly.

The one thing that most concerns us in deciding whether an amputation is imperative is to determine the damage to the blood supply. Even if there be no circulation below the wound I would be tempted to do temporary dressing for a few days and see if the anastomotic circulation would be sufficient to preserve the damaged member.

The general principles in the treatment of these cases are: 1st, control hemorrhage; 2d, clean up wound; 3rd, put in drainage; 4th, adjust the parts; 5th, put on your apparatus for maintaining this adjustment.

Often we see little hemorrhage from extensive gun shot wounds, as a rule we have to contend with a venous oozing which is easily controlled by compressers. If there be arterial bleeding we have to look for the vessel and tie it off.

The wound should be thoroughly cleaned, look for particles of clothing, wadding, shot, fragments of bone and of the soft tissues. Irrigate freely with antiseptic solutions. I have used creolin, bichloride and iodine, but feel that I get better results from the iodine solutions.

Infection being constant it is necessary that we employ free drainage. I prefer gauze but perhaps the tube does just as well.

The parts should now be adjusted and the splints and plaster applied. This, gentlemen, is by far the most important phase in the treatment of these cases. Many a poor fellow has lost a limb because his doctor knew of no way to put it up in proper adjustment for a sufficient time for recovery to take place. If the wound be of the hand or arm it is an easy matter to fix the parts so that your patient may go about, but when it comes to the leg we have a different proposition because of the larger size of the parts, the greater weight and because of the accidents that more often occur from slipping crutches, falls, etc.

Agreeing with Professor Sayre, that "too much hospitalism is not good for constitutionalism," we would endeavor to put on such a dressing that would enable our patients to get out of doors and so they

* Read at meeting of Medical Association of Georgia, Augusta, Ga., April, 1912.

will not be absolutely helpless. Two months or more in bed will make invalids of the best of us. It stands to reason that these wounds heal more quickly when not confined.

While the limb is being held in position by an assistant I first put on a layer of rubber daming above and below the wound, leaving wound exposed, next to this a flannel bandage from the toes to near the wound and from just above wound to the knee. Now comes a layer of plaster covering the flannel bandage. The splints are placed on while the plaster is soft, one on the inner and one on the outer side of the leg, or anterior and posterior if preferred. The splints are tied down with another layer of plaster bandage, reinforced with plenty of plaster. The rubber daming is turned back over the dressing and fastened with strips of adhesive, which prevents the dressing from becoming soiled.

The limb is held in position until the plaster is set, when the patient is able to go on crutches. This position may be maintained for two or three months and the wound dressed at will, beneath the splints.

Dr. J. T. Garland is the originator of this method of fixation so far as we know and during an active practice of twenty-seven years he has had numerous cases which come under this class. He did not amputate in a single case and in each instance was fortunate in restoring to usefulness every limb, wounded in this manner, which came under his care.

So far, I have not amputated for gun shot wounds of the extremities, my good fortune due in large part to a close adherence to the principles laid down by my friend and preceptor, Dr. Garland.

I wish to report a few of the most interesting cases.

CASE No. 1—C. B. Treated by Dr. Garland, and reported as follows:

"Several years ago I was called in to see a negro boy eighteen years of age who, while hunting and carrying his gun in the usual manner, on his shoulder, let it fall backward with the muzzle toward and almost in contact with his right leg, when it was discharged, making a wound from behind forward. A compound, comminuted, complicated fracture of both the tibia and fibula, two inches above the ankle joint was produced. Two inches of both bones were shot away, only the lateral

muscles and skin being left. My dressing for this wound was through and through drainage by tube, washed well with bichloride solution, and applied iodoform gauze. My mode of fixation was as follows: several layers of plaster were applied from toes to near wound and from above wound to the knee. Then I took pieces of cotton ties and bent so that it was bowed outward and over the wound, placing same on the outer and inside of limb and over the ends of these put several more layers of plaster as above, which gave absolute fixation with complete exposure of the wound. The boy was put on crutches at once. He was practically well in two months, with but little deformity and slight shortening, and to all intent and purposes this limb is as good as the other.

CASE No. 2—D. C. Gun shot wound through the hand. Wound on the palmar surface of the hand about the size of a five-cent piece, the dorsal side of the hand was absolutely blown away, every metacarpal bone being fractured and the wrist dislocated. This case was sent me for amputation. However, I deemed it advisable to try to save the hand. Under ether the wound was cleaned out, some of the wadding still being in the hand. The dislocation was reduced, rough ends of the metacarpal bones cut away and necrotic tissues removed. Through and through drainage was maintained for several weeks and the hand kept either in a bichloride or creolin soak during the entire day. Soft parts healed rapidly and in two months the hand was practically well with little deformity. The following year the patient worked a crop and said his hand was as good as ever.

CASE No. 3—W. C. Shot gun wound, at close range, through left leg three inches above ankle. Two inches of tibia shot away and fibula shattered, with all the soft tissues of the anterior and inner aspect of the leg shot away. Temporary dressing done that night after the wound had been cleaned, shot and pieces of clothing, fragments of bone and lacerated tissues were removed, hot compresses were applied to control venous hemorrhage. The following morning, after having splints made, the leg was put in plaster with splints fastened in, the wound was dressed daily for awhile, constant drainage being necessary for some days. Repair of the soft tissues was rapid. In ten

weeks the plaster was removed. The patient has a limb perfectly straight, no shortening, and is as useful as before the accident. This boy was on crutches the day after the splints were applied and at no time suffered any great inconvenience.

CASE No. 4—J. S. Shot gun wound through right wrist. Both ulna and radius were badly shattered. The carpal bones damaged with a decided dislocation of the joint. This was by far the most severe wound that I had because of joint complication. The wound was cleaned, through and through drainage put in. The hand was placed on a board in as good adjustment as possible under the circumstances. Bichloride solution 1-2000 or creolin 1 dram to the quart was continuously applied for several days. Much swelling was present and quite a bit of foul pus was discharged daily. For awhile it seemed that amputation was imperative, however these complications soon cleared up after resorting to iodine solutions 1 to 4 drams to a quart, and to the injection of iodine petrogen. Two months later, under cocaine, I opened a sinus and removed several fragments of bone.

At present the boy has a good arm and hand with some wrist action, and is able to perform his duties regularly as a farm laborer.

TYPHOID VACCINE*

J. W. Palmer, M.D., Ailey

The typhoid season now opening up, I know of nothing of more vital interest to the physicians, especially the physicians of the agricultural districts, than the knowledge of a remedy to prevent and control typhoid fever. As to the history and preparations of typhoid vaccine, I shall leave that to the bacteriologist, upon whom I depend for said knowledge, and confine myself to personal experience from a clinical, bedside study.

Immunity now being one of the most important phases of modern medicine, we should remember the following facts in connection with the administration of this remedy: That immunity from typhoid fever is secured by having had an attack. That dead or live typhoid bacilli in animals causes immunity by developing antibodies known as opsonins which are cer-

tain substances in the serum that so affect bacteria that they are more easily taken up and disposed of by the leucocytes. They prepare bacteria for phagocytosis. These antibodies, or opsonins, can be increased by injecting killed cultures of bacteria. When bacteria are injected, the immunity produced is a bacterial immunity; when toxins are injected, a toxic immunity results. What is known as the opsonic index is the ratio of the average number of bacteria per leucocyte when the patient's serum and the serum of the healthy individual determine the phagocytoses, that is, it expresses the degree of immunity or power of the individual to resist or overcome the invading bacteria. This opsonic index is increased with each dose of vaccine (except a temporary lowering—negative phase) until finally immunity is established and the patient's own blood serum becomes an anti-toxin for the disease.

Typhoid vaccine has a prophylactic and a curative value. The prophylactic value has been recognized since 1895, and from that time to the present, I am certain you are familiar with the history and the remarkable and gratifying results obtained by the English, German, and especially the American armies, therefore I refrain from going into history and statistics of same. Suffice it to say, with typhoid vaccine prophylaxis, the 12,000 soldiers of the 18th U. S. Infantry encamped at San Antonio, Texas, were protected from typhoid fever to the extent that only two cases developed of which one was not vaccinated and the other had only two inoculations.

Danger.—There has never been nor can be any evil effects from typhoid inoculation with the proper precautions. It is a harmless, practicable and effective way of preventing typhoid fever, so don't be afraid to use it. There is no danger in it because it is prepared by heating a 24-hour culture of typhoid bacilli one hour at 60° C., washed with normal saline solution, emulsified, standardized and preserved with 5% phenol, after which proper tests are made to insure sterility; besides, the theory that the negative phase just after inoculation which might produce susceptibility is denied by some of the best authorities.

The symptoms are local and constitutional. The local, which like the constitutional symptoms, vary widely in different individuals. The local symptoms begin im-

* Read at meeting of Medical Association of Georgia, Augusta, Ga., April, 1912.

mediately after inoculation and last from one to five days, usually only two days. There is redness, soreness, tenderness and induration around the seat of inoculation. The redness and swelling sometimes will cover the greater part of the arm and the axillary glands may become tender. There may be urticarious eruption around seat of inoculation with intense itching, and in few extreme cases, there has been an erysipelatous condition, however, practically in all cases the local symptoms are so mild that you can go on about your business with no discomfort.

The constitutional symptoms begin in few hours after local reaction, and you have the symptoms of a mild typhoid infection lasting from 12 to 48 hours. In about half of my cases there were no constitutional symptoms at all. This was true in my own case when I was inoculated. I did not feel any unpleasant symptoms whatever, constitutionally. In fact, it had a rather exhilarating and stimulating effect on me. I was not bothered from regular work the least. However, though I prefer some reaction constitutionally because in active immunization the individual must undergo a modified form of the disease.

Administration.—The seat of inoculation should be at that part of the body where there is rapid absorption by the blood and lymph, and must not be injected in a vein. The insertion of the deltoid muscle is a very good place for seat of inoculation. Have the parts sterile, and use antiseptic precautions. If practical, administer in afternoon so the patient may have 12 hours in which to be quiet, allow no stimulants, and if any constitutional symptoms, patient should lie up for 24 hours if practicable, if none, let him go about his daily work. Administer 30 grs. sodium chloride half hour before inoculation to prevent severe local symptoms. At my first inoculation I did this, but at my second I forgot it, and in about three days I had a severe urticarious and severe itching condition around seat of inoculation which annoyed and frightened me very much, as I felt sure it was erysipelatous. At first inoculation, give half million typhus bacillae, in ten days give one billion, and in ten more days give one million again. Always give small doses at first, but in subsequent injections, you need not be afraid to give large doses. After the first inoculation there is usually no further

constitutional symptoms, and the local very slight.

The Curative Value.—The curative treatment of typhoid fever with typhoid vaccine is condemned by most of the best authorities, but in mild cases I shall continue to use it until I am convinced it is injurious, because my experience with it warrants its use in selected cases. During typhoid fever the opsonic index is lowered, and can be increased by injecting typhoid vaccine, and as these increased opsonins aids the leucocytes in destroying the bacteria and helps to establish the immunizing process, it should be used unless when the attack is severe, and the auto-intoxication is too great and the patient is already crippled from it. It will cut short the duration, prevent hemorrhage and those relapses which we look for and are so much dreaded in those mild cases. In administering for curative effect, very small doses should be given, not exceeding fifty million. The earlier the treatment the better the results and prognosis. The dose in curative treatment should be repeated every third or fourth day. When inoculated the patient will be worse for first twelve hours, then improvement for three or four days, and at the point of a standstill or aggravation of the symptoms is when to repeat the dose. Other medicines and treatment should be kept up. In treating paratyphoid fever we must use a paratyphoid vaccine and not the typhoid vaccine. Autogenous vaccine is the best to use if practical.

Duration of Immunity.—The length of the immunity conferred by this method of treatment varies and has not yet been settled. The agglutination of the blood of the inoculated person show the immunity to be about twelve months, and is supposed to be immune from one to three years. However, the immunity based on the agglutinating reaction of the blood is not reliable because it has been shown that the duration of immunity is much longer than the agglutination of the blood. Chanlemesse inoculated some attendants in 1899, and about two years ago one of these same attendants accidentally injected one drop of typhoid culture which did him no harm, but if he had not been vaccinated eleven years ago he certainly would have contracted typhoid fever. The immunized individuals are less likely at all times to contract the disease, and if they should, it will be less severe and fatal.

Typhoid Bacillus Carriers.—It has been successfully demonstrated and proven that by properly inoculating chronic typhoid bacillus carriers the bacilli disappear from the excretions. This is a valuable discovery, because these carriers are the ones who secretly go about over the country depositing millions of typhoid bacilli, which the flies pick up and deposit on our food, in our water and milk, and produce sporadic cases and epidemics which still puzzle some authorities as to their origin.

I have always been an enthusiastic supporter and believer in typhoid vaccine, so much so until I took the treatment myself before I ever administered it to one of my patients. After inoculating myself, and the unpleasant effects being so slight, I have been more enthusiastic in its use than ever. My results with it have been very gratifying, not one of the vaccinated subjects have ever contracted typhoid fever. I have found no prejudice against its use because I assure them of the fact that its use is harmless, that it will protect them from having the fever, that I have used it myself, and I speak of it as inoculation, and in that way I don't meet with the opposition and prejudice that I do in vaccination. I want to urge and prevail on every physician in the State who are not using or have not used it to begin its use at once, and especially do I urge you to use it on the entire household when one member of the family has acquired the disease, and upon all those who have any regular association with typhoid patients, because you would be just as guilty of criminal negligence in not doing so as you would in not using tetanic anti-toxine in all closed gunshot wounds to prevent tetanus, because typhoid inoculation is harmless, it is a success and a necessity, and its use is no longer questioned. It is now universally used in armies, hospitals, laboratories, amongst physicians and nurses when exposed, and in most epidemics and in all large gatherings for any length of time. I hope the time is not far distant when its use will be required in all universities, high schools and public schools of both the cities and county, and that every citizen of the State will be vaccinated at least one time, that the people will come to a full realization of the significance of immunity by inoculation, that its general introduction in civil practice will be universal, then with the continuation of the fight against the house fly we will see the "National

Disgrace" — typhoid fever — disappear from the country.

INTESTINAL SAND*

N. M. Moore, M.D., Augusta

Two varieties of intestinal sand have been described—the true and false. False sand differs from the true variety in containing a much smaller percentage of inorganic material (2 to 3 per cent. as against 28 to 70; in having a vegetable nucleus, and usually in consisting of coarser grains. In 1873, C. Robin described a case of false intestinal sand due to the schlerenchymatous particles of the pear; and Meyer and Cook have reported a case due to the ingestion of bananas. Other instances where figs, raspberries, and timothy grass seed have given rise to this condition have been recorded. Sir Dyce Duckworth and A. E. Garrod state that examples of true intestinal sand have been recorded in children under four years, although the majority of these cases have been reported in women from 30 to 45 years of age, and always associated with some intestinal disorder usually a mucus colitis. Its rather frequent association with gout has led to the theory that this might be an etiological factor. Appendicitis and constipation have also been suggested as possible causes. Those cases of true intestinal sand in which chemical analyses were made were found to be composed chiefly of calcium salts, usually the phosphates and carbonates, although Emerson reports a case in which calcium sulphate predominated. Magnesium, phosphorus and iron have also been found among the inorganic constituents. It is interesting to note that all of these elements are normally excreted from the body by the intestinal canal. The organic material forming the nucleus of this true sand has usually been found to be composed of epithelial debris and bacteria.

Duckworth and Garrod state that although urobilin was present in the specimens examined by them, cholesterin and unaltered bile pigment was not found. They argue that these findings negative any biliary origin, and suggest that the formation of the sand must occur far down in the intestinal canal, probably in the upper part of the colon. The fact that by

* Read at meeting of Medical Association of Georgia, Augusta, Ga., April, 1912.

far the larger amount of calcium eliminated through the feces is excreted in to the large intestine his further evidence that this sand is formed in the colon. While the production of intestinal sand is generally supposed to be due to a secretory neurosis, and not due to a high calcium content in the ingested food; still it is probable that a diet containing much calcium would at least tend to aggravate this condition. It is peculiar that more cases of true intestinal sand have not been observed in infants, for these little patients are peculiarly susceptible to ilio-colitis, and their diet is mainly composed of milk which is very rich in calcium salts.

My attention was first called to this condition last year upon examining the stools of a little pellagrin, 2½ years of age, admitted to the Children's Hospital. He was suffering from an obstinate diarrhoea, characterized by most foul smelling movements. These were found to contain a considerable quantity of a gritty substance looking like sand. No chemical analysis was made, but as the condition disappeared soon after the patient's admittance I am inclined to consider it a case of false sand due to some article of food he was getting before being admitted to the hospital. Soon after this I was called to see a little patient 21 months of age, whose mother stated that the day before she had noticed in his movements some mucus and a considerable amount of sand. She supposed the baby had swallowed this, although he was not in the habit of putting foreign substances in his mouth, and it was not known how he could have gotten it.

This condition persisted from April until September of last year, and occasionally since then small quantities of sand have been noticed in the stools.

The infant was breast-fed during his first year, but had a severe attack of ilio-colitis when 13 months old. Since then he has suffered more or less from constipation, and until recently there has been a noticeable quantity of mucus in his stools. He has had no other illness. His diet at the time this condition was first noticed consisted of milk, beef juice, orange juice, crackers, corn bread oat meal, and occasionally, eggs. He was anaemic, but fairly well nourished; and the physical examination was negative except for a systolic murmur at base of heart. There was no tenderness on abdominal palpation.

The mother stated that when condition was first noticed, baby seemed to suffer some discomfort before bowels moved, but after a few weeks there was no further evidence of pain at these times. There was as much as half a teaspoonful of the sand in some of the movements seen by me.

A specimen of this sand-like substance was given to Prof. John W. Dow, to whom I am indebted for the chemical examination. He reports that it was a gritty substance resembling sand in its physical properties and under the microscope showed a crystallin structure. Chemically the tests for carbonates, phosphates, cholesterolin and bile pigments were negative. The quantitative analysis showed 91.4% organic matter and 8.6% inorganic; thus proving the case to be one of false sand.

This case is of interest because of the fact that those foods known to be capable of giving rise to this condition can be positively excluded and also because of the long duration of the trouble.

References—

- The Lancet. Vol. I, page 653.
- Medical Record. Vol. 74, No. 22.
- The Lancet. Vol. II, page 215.
- Jour. Am. Med. Assn. Vol. LIV, page 270.
- Am. Jour. Dis. Children. Vol. II.

Discussion on Dr. Moore's Paper

Dr. J. E. New, Dexter, Ga., said that after hearing the paper it occurred to him that two years ago he had an interesting case of umbilical hernia, a child 3 or 4 years old, and he was unable to account for its hardness. He operated and found in this hernia much sand caused, as I thought at the time, by the patient having eaten quantities of dirt and other filth. After he strangulation was reduced, the patient had copious stools, mostly of "sand" and mucous, but recovered promptly within a short time. It may be an analysis of this material would have shown it to be the "intestinal sand" of which Dr. Moore refers.

Dr. Harvey W. Wiley received the degree of Doctor of Science from Lafayette College, Easton, Pa., on June 19.

Dr. Theodore Caldwell Janeway, professor of medicine in the College of Physicians and Surgeons, New York, was one of the few honored by Yale University at the commencement exercises on June 19, receiving the honorary degree of Master of Arts.

FLOTSAM AND JETSAM FROM A MEDICAL STANDPOINT*

B. P. Oliveros, M.D., Savannah

"The wrecking crew has been working overtime; Is it not time to put a construction gang on the job?"

When a very prominent scientist was asked if he had a message to give the American people concerning a certain condition, he replied: "That he could give a message, but whether the people would take any stock in it was another question."

When preparing this paper, I had somewhat the same feeling. It is true that I have no message to give to the profession at large, or to the gentlemen assembled at this meeting, but I hope to attract your attention to some of the flotsam and jetsam of our profession; to the enormous amount of wreckage, so to speak, either thrown overboard by inattention, or lost in the vast sea of ignorance. Like Professor Dingo, in "Bleak House," who brought down the displeasure of the people where he was staying, because he was continually chipping off fragments of the edifice with his little geological hammer, because he knew of no building save the temple of Science, I expect to be a critic criticized, if I endeavor to knock off a few corners of cherished opinions and hard and fast rules pertaining to our temple of Science.

I would be compelled to have a complete mastery of language and a vocabulary of enormous proportions at my command, to even do justice to my subject. If I could place before your eyes, and blazon before your minds an immense screen crowded with the doings and non-doings of our profession which can be remedied only through educating its members and by telling them and the people the real facts, some thing worth while might be accomplished. For when inefficient medical education, combined with egotism and prejudice, constitutes a competency to cure and heal; when medical boarding-houses crop up all over the country under the name of sanatoria; when advertising quacks with their No. 1 and No. 2 nostrums are

allowed to enter any city or town with blare of trumpet; when plagiarism runs riot and nihilism's cloak grows larger and thicker as therapeutic instruction grows less, we must realize that the wrecking crew has been working over-time.

One may surrender himself gladly to optimism or throw himself into the depths of pessimism; things may become better or things may grow worse (and I am optimist enough to believe that things may have grown better), yet, revel as I will, in the prodigal vitality of my senses, I cannot, through the light of a cold and dispassionate reason, help but see what the issue may be.

The doctor is the arbiter and perhaps the dictator of the physical existence of his patients, the father confessor, the receptacle of the most private information, the man to whom is yielded an obedience that is not rendered even to the Maker of their beings, and yet in how many instances is this sacred confidence abused, this professional secrecy broken and passed from mouth to mouth. How futile is the family skeleton of a syphilitic or gonorrhoeal infection from husband to wife, or vice versa, if professional integrity is an open sesame! Which of our patients can guard an unfortunate secret of morphine or cocaine habit, if this man, this inevitable professional man, chooses to belittle the confidence grudgingly, but necessarily placed in his keeping!

It is said that "One may read to enjoy and not to ponder, to forget and not to remember." How well it would be if we, as physicians, could listen not ponder, and agree to forget and not remember. With the physician of today the confidence of his patients is held lightly, not by all, but unfortunately by too many. A family disgrace of a medical or obstetrical nature is often beyond the sacred precincts of the home when it is placed in the keeping of the supposed intimate and trusted medical attendant; egotism and desire for notoriety leading him to the imprudence of mentioning the fact to a brother physician or even to another patient, thus starting a scandal and a wrong which should never have passed beyond the bounds of its inception.

Tempered by a conception of possibilities and, perhaps, a trifle hysterical, owing to the fact that you may not grasp my viewpoint, I am loath to mention many

* Read at meeting of Medical Association of Georgia, Augusta, Ga., April, 1912.

things which occur to my mind. We might anticipate loud shrieks of anguish were we in a position to change an environment which has never been changed and yet to which many people have been taught or have taught themselves to adjust to their own way of thinking. The preaching of virtues that lead to the rallying call for an increased population has been perverted. The doctor is, no doubt, responsible to a large degree for the decrease in the birth rate, not by his lack of skill or his attentions, but to the undoubted fact that he has always been a willing instrument in the hands of the people in the way of giving information and instruction as to the how and when to avoid conception, or even by the removal of the means to that end. It is not my intention to go into the history of race suicide, but only to call your attention in this cursory manner to the perversion of the word "increase," as we see its application in this day and generation. When French scientists tell us that to the forty millions of people in that country, that only eight hundred thousand living babies will be born in 1912, and that in our country we will do very little better, we can get some idea of the enormous amount of responsibility that we have taken upon our shoulders. Whether we are wise in our day will bear argument. Along in the seventeenth century Alexander Pope propounded the conundrum: "Who shall decide, when doctors disagree?" And it has never yet been answered.

A hundred years from now, when a bulging-browed and long-whiskered historian, who has more than a rudimentary conception of the advantages that might accrue to an able and industrious physician, goes digging into the records, is it hard to picture his consternation when he comes across some of the hundreds and thousands of drug names used in prescriptions and treatments at the present time? The proprietary mixtures that are sent out by drug houses with a guaranteed 5 or 10 per cent. alcohol and a formula which may or may not be correct? Preparations with their euphonious names, "By which you might know me, in case the other fellow sends out an imitation of me." This old historian will, no doubt, decide that we had developed with our advancement. It seems strange to me that any intelligent physician will undertake that poorest of all deceptions, the deception of one's self.

We deceive ourselves, undoubtedly, when at the suggestion of the sample man we use some preparation without knowing to a certainty either quantity or quality as well as formula. We deceive ourselves into believing that we are running with the interlocking eggs of an advancing civilization. A prescriber of doubtful formulas and ready prepared mixtures reminds me of the distant Westerner who, when asked why he carried his barrels forty miles for water, replied "It is closer to water overland than it is straight down." Are we not barking up the wrong tree when we sit quietly and permit an era of ease in the application of remedies to disease; an era which seems to be enveloping us in the meshes of therapeutical ignorance? Are we to no longer know and study drugs? Are we to crucify our patients by compelling them to swallow remedies of unknown and doubtful entity because money-making drug concerns are trying to make us believe that it is easier than going straight down to study and research?

It is more or less easy to portray imaginary topics, but when one undertakes, in a manner sufficiently sensational, to call to his aid the mysterious forces which, within themselves, control the medical man, he burdens himself with a conceit which is paramount to an arbitrary judgment of his fellows; however, be that as it may, we can't help but know and feel that there is hardly any more co-operation amongst physicians than there is among the pellets of shot in a bag, every local celebrity works in his own little circle, without any regard for his less fortunate brother of his town; he has merely an eye to making his ability and skill conform to the opinions and good will of his patients, or in his egotism he forms a coterie of his friends, who, for social or other reasons not by any means scientific from a medical standpoint, as a brilliant setting to his supposed professional prominence; the local or district brother may come within the scintillations of this brilliant circle, providing always that he furnish his quota of cases with their concomitant fees. One thing leads to another, the goats must be separated from the sheep, unfortunately the old rule of the "survival of the fittest."

We are no doubt trying to bring the whole medical body of the State together

as a co-operative unity, for the common good, but it is a sad commentary on our ethics, on our professional dignity, when we assemble yearly to hear scientific papers supposedly for the advancement of ourselves and more especially for the men who have less opportunity for study and a poorer field for experience, that our meetings are harassed and depleted by the absence of members who are being winned and dined because politics are rampant. It is unfortunate that the election of officers must be a bone of contention and a most embarrassing interference with the regular scientific program of our State meetings, simply because our officers are elected on the last day instead of being the first order of business. As things are at present, we lack that spirit of spontaneity of good feeling and desire for rewarding the best and most responsible man, thereby making a miserable failure of the scheme of things as it was originally intended.

I might go on and on and call down your maledictions on many more evils, point out to you much flotsam that needs our consideration and some jetsam that would lighten our burdens, were it not for my desire to claim my share of that rare accomplishment, often forgotten by so many writers, namely, the recognition of the importance of brevity.

LIGATION OF THE THYROID VESSELS IN EXOPHTHALMIC GOITER*

William S. Goldsmith, M.D., Atlanta

The modern nomenclature relating to diseased conditions of the thyroid gland simplifies the description of symptoms of exophthalmic goiter and other pathologic changes in the gland, accompanied with marked physical disturbances due to excessive production of its internal secretion. This hypersecretion and absorption is spoken of as hyperthyroidism.

Equally well chosen is the expression hypothyroidism, indicating a marked decrease in functional activity of the gland. The general recognition by the profession at this time of the term exophthalmic as indicating only those hypertrophic changes accompanied by the eye symptoms and other physical disturbances, as tachy-

cardia, tremor and gastric and intestinal crises, is my reason for using this term instead of the strictly correct name, hyperthyroidism. The same principle is involved in the endeavor to effect an amelioration of the symptoms or cure any selected number of these cases by the ligation method.

The functional activity of the thyroid gland is normally dependent upon its blood supply through the two superior thyroid and two inferior thyroid arteries. Excessive hypersecretion and absorption, evidenced by symptoms of hyperthyroidism, with or without exophthalmos, can be moderated and probably entirely controlled by the permanent obliteration of one or two avenues of vascular supply. Many cases have been cured by ligation and without doubt a large number would be denied the advantage of surgical aid if only the more radical measures, as thyroidectomy, had been suggested.

The ligation of one or both superior thyroid arteries and veins, under the influence of cocaine infiltration, is applied surgery divested of many dangers and eagerly accepted by the faint-hearted patient. Beyond the foregoing reasons it makes possible the safe performance of an operation upon the individual, who, on account of various physical changes and defects, general anaesthesia would be a most hazardous undertaking.

The use of a two per cent. solution of cocaine in the skin with one-half to one per cent. solution in the deeper structures and due care, deliberation and precision exercised in the execution of the operation, will result in a procedure practically free of pain and stress of the usual post-anaesthetic period.

I cite below one interesting case of hyperthyroidism consisting in ligating the left superior thyroid artery and vein under cocaine anaesthesia.

CASE—J. G. D., white, male, age 25, deaf-mute, unmarried, weight 122½ pounds, printer. Operation December 2, 1911. Family and past personal history good. Excellent general health until February, 1911, when he began to experience frequent attacks of twitching of the right side of right shoulder, neck and face. About March 1st he developed seizures simulating epileptiform attacks. These attacks occurred regularly six or eight times a month. He became very nervous, suffered with indigestion and nausea, and developed a most pronounced salivation,

* Read at meeting of Medical Association of Georgia, Augusta, Ga., April, 1912.

expectorating quantities of saliva almost constantly. This salivary flow continued even at night while asleep.

About April 1st he noticed a tumor of the right side of the neck, which slowly increased to the size of a lemon. He continued to grow more nervous and was forced to give up his occupation as a printer. He was referred to me on November 20th for operation on the goiter. The enlargement of the right lobe was of the type seen in cases spoken of as vascular hypertrophy. He did not have a marked tachycardia the pulse being 100 to 110. The physical condition was such that I decided to substitute the simple operation of tying the vessels instead of removing the right lobe. My explanation for ligating the left vessels in preference to the right (the hypertrophy was on the right side) was the expressed wish of the patient on account of the presence of a scar on the left side on the neck just in line with the incision. The ligation of only one side, when both superior thyroids should be ligated in these cases, was due to the objection of the family to my undertaking too much surgery without a general anaesthetic.

The immediate convalescence was uneventful, except for the rapid diminution in the excessive salivary secretion. He gained two and one-half pounds the first week and continued this uniform increase each week, weighing 147½ pounds ten weeks after the operation.

The thyroid hypertrophy gradually decreased in size. The epileptiform attacks were not influenced for four weeks. During the past six weeks marked improvement has been noticed, only one seizure occurring during the past ten days and two seizures the previous ten days. The twitching of the shoulder and neck also decreased in frequency and annoyance. He has been sent to the country on a farm and advised to stay all the summer and do light work.

There was no other treatment administered, and I can ascribe the wonderful improvement in this case to no other medium than the ligation of one of the thyroid vessels. The operation was almost painless and done with little difficulty. The vessels are of easy approach. The bifurcation of the carotid and recognition of the first branch of the external carotid makes it a simple ligation.

C. H. Mayo advises also, the ligation of

the vein, claiming that this step decreases the dissemination of internal secretion.

A CONSIDERATION OF THE SUBJECT OF GOITER WITH ESPECIAL REFERENCE TO SURGICAL TREATMENT*

Edward G. Jones, M.D., Atlanta

It may be said that the following facts relating to the physiology of the thyroid are admitted to be true:

- (1) Proper body metabolism demands a constant supply of thyroid secretion.
- (2) The necessary part of this secretion contains iodine.
- (3) The amount of iodine in the body tissues other than the thyroid is negligible.
- (4) The secretion is absorbed normally most probably by the lymphatics.
- (5) It is produced in greatest abundance between the ages of fifteen and forty.

We are justified also in assuming to be true the following facts relating to thyroid pathology:

- (1) Experimental iodine starvation will frequently, at least in dogs, produce "simple" goiter.
- (2) The symptoms of hyperthyroidism are due to absorption of the product of an over-active thyroid; this product may be pathologic in quality as well as superabundant in quantity.
- (3) In hyperthyroidism there is a definite relation between the amount of actively secreting epithelium (absorption being normal) and the symptoms exhibited.¹
- (4) The severity of hyperthyroid symptoms is proportionate to the amount of iodine (or iodized proteid) delivered to the circulation.
- (5) Absence of the thyroid or of thyroid function causes myxoedema.
- (6) Of the etiology of goiters in general there is no present knowledge, or even hypothesis, which is so inclusive as to afford a uniform explanation of the varying phenomena accompanying their appearance and their development.

* Read at meeting of Medical Association of Georgia, Augusta, Ga., April, 1912.

¹Louis B. Wilson, American Journal Medical Sciences, December, 1909, and others.

When one seeks to classify goiters he loses entirely the necessary conception of the whole subject unless he puts himself mentally in touch with the histologic picture in the gland. Speaking generally, the pathology of the acinus is the pathology of the whole gland. The facilities for producing thyroid secretion plus the facilities for its absorption determine the symptoms.

It is quite doubtful if we are correct in adhering to the classification of some goiters as "simple"; but until additional light shall have been shed on the situation we are somewhat obliged clinically to recognize the terms "simple goiter," "simple cystic goiter," "simple colloid goiter," etc.

If one fix his eye mentally on the thyroid acinus, there are:

(1) The acinus lined with a single layer of cuboidal cells containing a moderate amount of fluid absorbable material; multiply this acinus by the number of acini in the gland and we have the normal thyroid. (Fig. 12).

(2) The acinus more or less struttled with a mucilaginous, semi-fluid material, and lined with cells showing evidence of impaired function corresponding to the degree of intra-acinal pressure. (Figs. 13 and 14). The contained secretion is plainly not easily absorbable,² and its retention may have begun with blocking of the lymphatics. Now, multiply this acinus by the number of acini in the gland and we have the so-called "simple colloid goiter," or "simple cystic goiter"—perhaps the common goiter of puberty, perhaps the common endemic goiter. This goiter is to be looked upon as a simple retention cyst.

(3) The acinus containing but little secretion and lined with cells crowded closely together, perhaps in a double layer, or perhaps multiplied by papillary projections into the lumen—the typical Graves' gland (hyperthyroidism).³ (Figs. 16 and 17.)

(4) The acinus so struttled with colloid as that the secreting epithelium is destroyed—the myxoedematous goiter. (Fig. 15.)

Of course there are clinically many goi-

ters which do not correspond with exactness to any of the above well-defined types; yet the symptomatic variations are still due to the histologic changes. Only a small part of the gland may be involved (nodular); a part may be over-productive (Graves) and another part under-productive (colloid); a large part may have been replaced by a collection of retained secretion, the inter-acinal walls having been eroded by pressure so that a number of acinal cavities have coalesced (cystic), etc., etc.

There is much experimental evidence to prove that so-called simple hypertrophy of the thyroid may be produced by a deficiency of iodine in the diet. It has been shown (Marine and Williams) that the amount of iodine per gram of gland tissue progressively decreases from the normal gland to the most marked hypertrophies. The same observers have shown that the pups of thyroidectomized bitches will not have simple goiter if fed iodine in excess, it having been demonstrated (Halsted) that they will be so affected if fed ordinary diet. Many phenomena, which cannot be recounted here, indicate that the amount of ingested iodine may not fall below a definite minimum without compensatory hypertrophy.

It should not escape notice that most of the experimental work proving that deficient iodine will cause simple goiter has been done on dogs. Now it is accepted that goitrous dogs seldom exhibit symptoms of hyperthyroidism even though examination of the gland histologically presents the hyperthyroid picture.⁴ In explanation of this fact it has been submitted that a dog has not a highly organized nervous system, and since the most compelling symptoms in human beings are those relating to the nervous system, these manifestations could not be expected to occur in a dog.⁵ Insofar, therefore, as goiter in dogs is deliberately produced by withholding iodine, the classification of such goiters as "simple" because well defined symptoms are not produced seems open to question. That microscopic examination of such glands, however, usually reveals the colloid (simple) picture seems established.

²"except the watery edematous colloid conditions seen in the goiter of adolescence which so commonly reverts to the normal gland."—C. H. Mayo, Surgery, Gynecology and Obstetrics, April, 1912.

³McCallum believes the characteristic hyperthyroid histology consists in a budding or infolding of the acinal epithelium together with certain deteriorations in the morphologic character of the cells.

⁴See Alex Werelius, Surgery, Gynecology and Obstetrics, August, 1910.

⁵This fails, however, to explain the well-known fact that dogs do not have exophthalmos.

At the same time it cannot be admitted that this factor (deficient iodine) is the usual cause of any kind of goiter, except possibly endemic goiter, and then it does not explain, for example, the greater prevalence in females and the peculiar incidence at puberty.

In whatever specific way physical, or mental, or nutritional taxation may act, it is universally admitted to be true that they are connected in an etiological way with the appearance and continuance of **hyperthyroidism**. Prolonged worry, sickness in the family, the nursing of a child or husband, railroad accidents, social and financial anxiety, wasting diseases like tuberculosis or typhoid or nephritis or pelvic disease in particular, insufficient or improper food, bad hygienic surroundings, overwork, loss of sleep—all these and similar depressing influences are notoriously coincident with the onset of Graves' disease. (Figs. 1, 7, 1, 11, 18.)

All theories which are at all explanatory assume too much secretion, and that the excess constitutes an overdose.⁶

It may be that many thyroids produce too freely, or produce a pathologic secretion, and that the natural resisting powers of the individual are sufficient in health to so combat the abnormal product that no symptoms are produced (moebius). But add to the tax of combating this abnormal product the tax of combating infection, e. g., (the natural resistance being also lowered by the infection) and the requirement is too heavy. Symptoms of hyperthyroidism appear. Remove the infection and Graves' manifestations will disappear—if the damage has not been too great. If the depressing influence be prolonged, or repeated, or perhaps, anyway, the equilibrium cannot be restored: hyperthyroidism is established.

A theory which has been called the reversion theory,⁷ reasoning from the fact that the thyroid was originally connected with the alimentary canal (being developed from the pharynx between the first and second branchial arches) and in all probability had a duct which delivered its product to that canal, assumes that it had a digestive function. It is reasonable

to suppose that there was then some normal stimulant to its activity as there is now a normal stimulant (hormones) to pancreatic activity, e. g. It is not unreasonable further to suppose that that stimulant, whatever it be and wherever it be,—in the food, or air, or formed in the blood or in the intestines—still under certain undetermined conditions stimulates the thyroid to undue activity. But since, in man's development, the thyroid has come to have no duct by which the secretion thus called forth by this hypothetical influence may reach the alimentary tube, one or two things results: either the over-production is absorbed by lymphatics (or blood vessels), and a condition analogous to toxemia (hyperthyroidism) supervenes; or else the over-production is not absorbed, and cyst formation (colloid goiter) is the consequence.

Or again, granting that the thyroid product is necessary to the proper functioning of all organs and tissues in the body, it may be assumed more particularly⁸ that there are two constituents of this product; one of which (nucleo-proteid) is highly stimulating to the adrenal, and especially to the sympathetic system; and the other (globulin) a universal adjuvant to metabolism and cellular activity everywhere. The presence and general behavior of these two constituents being admitted, one may assume that when circumstances such as pregnancy, puberty, infection, prolonged illness or fatigue, and the like—all of which call for increased functional activity, increased resisting power—are present, they call for increased thyroid activity insofar as more of the tonic (globulin) constituent is now needed to stimulate cellular activity. But increased thyroid activity means the production not only of more of the globulin content, but also of the nucleo-proteid—and the manifestations of over-stimulation of the sympathetic (tachycardia, nervousness, flushing, sweating, etc.) thus appear. The thyroid itself, responding to the increased call, exhibits cellular proliferation; and, responding likewise to the increased sympathetic stimulation, assumes a double pathologic state (histologic and functional), so that even though the original depressing influence may have been withdrawn a vicious circle has been established, the breaking of which can be ac-

⁶The enunciation of this fact (Moebius, 1886) marks the most important epoch in the treatment of thyroid disease. One cannot say that its truth has yet been generally recognized.

⁷MacCarty, American Journal Medical Sciences, June, 1909.

⁸Rogers and Beebe, Annals Surg., December, 1909, and February, 1910; Journal A. M. A., September 2, 1911.

complished now only by measures which will reduce the thyroid activity.⁹

The idea that the thyroid elaborates a product to combat toxic materials resulting from cellular metabolism, and especially nitrogenous metabolism, throughout the body is one which naturally suggests itself and which perhaps cannot be positively disproved. It has been supposed that this is the function of the thyroid, and that this view explains the increased activity of the gland during pregnancy, during infection and so on. What may be called the detoxicatory function of the thyroid, however, does not seem to have been very generally accepted for reasons which cannot be elaborated here.

Nor can we omit to mention views which concern the interrelation of various glands in the body. It is not probable that any one is independent of another. There are supposed to be influences which stimulate or inhibit the secretion of several glands in common; the secretion of a given gland may stimulate, or inhibit, that of another. The thyroid seems to stimulate the adrenal, and the opposite may be so. The hypophysis is said to enlarge with thyroid atrophy. The adrenal is supposed to inhibit the internal pancreatic secretion. Clinical experience so often connects pelvic, probably ovarian, disease with thyroid hypertrophy that one is strongly tempted to perpetrate an hypothesis which offers to explain the coincidence, or the sequence, as the case may be.

Clinically there is much in hyperthyroidism which parallels infection. Two factors determine the outcome in infection—(a) the amount and virulence of the poison, and (b) the resisting power of the patient. The same two factors determine the outcome in hyperthyroidism, and both must be taken into consideration in the prognosis. One cannot foretell the issue in untreated hyperthyroidism any more than in untreated streptococcic infection—and for the same analogous reasons.

The symptoms of simple goiter as long as it remains simple are none except those associated with the mere physical presence of the enlarged gland. These are chiefly pressure on the trachea causing **dyspnoea**; pressure on the recurrent laryngeal causing **hoarseness**; and other

occasional and varying pressure results. It should be understood that without secondary changes (cyst formation, etc.) pressure symptoms comparatively seldom are a cause of much trouble. To the pressure symptoms should be added the **physical disfigurement** and the **psychic concern**.

Here it should be said that perhaps a great majority of goiters which we ordinarily look upon as simple and symptomless are really not symptomless, and therefore not simple. Careful questioning and observation will usually bring to light one or more symptoms like slight tachycardia, easily induced nervous instability, mental depression, mild unexplained hysterical attacks, disturbances of menstruation, constipation, etc., etc.—all manifestations which have from time immemorial been looked upon as a not unnatural part of a woman's life, and particularly of a girl's gradation into womanhood—and yet symptoms which are really identical in character, if not in degree of severity, with those of hyperthyroidism. The physician's mind is too fixed on the major symptoms of exophthalmos, pronounced nervousness, etc., to admit that there may be Graves' disease in their absence. It is just these patients whose condition ought to be recognized promptly, because it is these for whom surgery can do much without risk when other measures tried for a short time—**not indefinitely**—have failed to control the symptoms.

The symptoms of established hyperthyroidism are so widespread that the scope of this paper prohibits their separate consideration. A few words in the way of a sort of negative discussion should be recorded.

(1) The size of the gland has practically nothing to do with the situation. The largest gland may produce symptoms notably less severe than a gland whose enlargement is a matter of doubt. In explaining this fact it is necessary to keep in mind (a) the varying toxicity of the secretion, (b) the varying resistance of individuals, (c) the varying activity of thyroid epithelium in producing the iodine content (including the destructive changes which may have gone on in the gland).

(2) Whether or not exophthalmos¹⁰ be

⁹The deductions from this hypothesis are drawn rather from clinical phenomena which are in accord with it than from any present known chemical difference in the two constituents mentioned.

¹⁰Now supposed to be due to over-stimulation of a non-striated muscle (Landstrom), cylindric in shape, attached to the orbital septum and to the equator of the bulb.

present makes no difference whatever so far as prognosis and treatment are concerned. This is the least constant of the three symptoms originally supposed to be cardinal—tachycardia, goiter, and exophthalmos—and should by no means be waited for.”

(3) The one symptom without which a diagnosis of hyperthyroidism is not warranted is tachycardia. It is to be remembered, however, that it may be intermittent, as may indeed the size of the gland and the exophthalmos.

(4) Tremor, melancholia, inability to sustain mental concentration, intermittent sweating and flushing, etc., in the presence of an enlarged thyroid are not evidences of primary organic disturbances in the central nervous system, or of neurasthenia, and these patients do not need to be treated for nervous disorders; the manifestations are due to the effect upon the nervous centers of an overdose of thyroid secretion.

(5) Muscular weakness, emaciation, slight afternoon fever, alternating constipation and diarrhoea, etc., with a goiter are not to be taken necessarily as evidence of some constitutional disease, but only as a part of the clinical state due to over-production of thyroid secretion.

(6) Exophthalmos and the other usual eye symptoms (Graefe, Stellwag, Moebius) likewise cannot be favorably affected by any sort of treatment directed to the eye.

These two things must be kept in mind:

First, the severity of all the symptoms varies under the influence of rest, mental and physical, quietude, hygiene, etc., on the one hand; and of exciting surroundings, physical exertion, worry, improper food, and thyroid feeding on the other; they even vary without any apparent cause.

Second, in what may be called the natural course of events, the symptoms of hyperthyroidism are due, **if the patient lives long enough** (four to twelve years in average cases), to abate; and the tendency is for them to disappear except as they may now be dependent on impairment of the long suffering heart, kidneys, liver, spleen, nervous centers, and other vital organs from the previous extended over-

stimulation. Indeed the tendency is for the pendulum to swing now beyond normal and for evidences of hypothyroidism (myxoedema) to appear. That the impairment mentioned is so marked and destructive as to leave the patient a semi-invalid is the common experience. Histologically this change (through years) is accompanied by, and explained by, disintegration or destruction by exhaustion, or by auto-stimulation, or by blocked absorption (hence pressure and cyst formation) of the thyroid cells.

So far as simple goiter may be caused by deficient iodine the logical treatment is with iodine or with thyroid extract. It has been noted previously that this cannot be admitted as the **usual**, or even as a frequent, cause, and therefore other treatment must be invoked.

The present day intelligent treatment of hyperthyroidism is based upon the assumption that a reduction in thyroid secretion is desirable.

Taking goiters as whole medical treatment has been notoriously inefficient. **Rest** in bed, mental quietude, removal of the originating **tax**, whether physical, mental, or otherwise, proper regulation of the **diet**, with proper stimulation of the organs of **elimination**—these will beneficially affect the vast majority of patients, at least temporarily, without any other form of treatment whatever; and one is not sure how much alleged benefit from medicines is due to these factors, for they are nearly always enjoined along with the medicine. However, these measures together with the administration of hydrobromate of quinine, or quinine with ergotin, as recommended by Forseheimer, or in, as recommended by Forseheimer, or some other form of medical treatment, ought certainly to be given a fair trial. Better results will doubtless be obtained when it is more generally recognized by the profession that such well-known teachers as Osler advise that a surgeon be called if some two or three months of medical treatment have not accomplished satisfactory improvement.

If the facts stated in the opening part of this paper are really true, namely, that the symptoms are due to too much thyroid secretion, and more specifically to too much iodine in that secretion, then the administration of thyroid extract or of iodine in hyperthyroidism is illogical. Clinically

¹¹It is interesting that of the first five patients reported in literature as having hyperthyroidism only one had exophthalmos. This paper was by Chas. Parry, of Bath, in 1825.



FIG. 1. Goiter and mild hyperthyroidism developing with pellagra; pulse 90-110; no exophthalmos. See Fig. 16.



FIG. 2. Same as Fig. 1, after operation.



FIG. 3. Cystic goiter, median lobe, with pulse 90-100. No exophthalmos.



FIG. 4. Example of thyroglossal cyst. Three months prior to operation began to exhibit "nervous symptoms."



FIG. 5. Enlargement confined to median lobe.



FIG. 6. After operation for symptomless goiter appearing at puberty. See Fig. 13.



FIG. 7. This patient exhibited all usual symptoms of hyperthyroidism except eye symptoms. After operation. (Prominence on right side of neck is defect in picture.)



FIG. 8. Goiter appearing with ovarian cyst. Intermittent tachycardia, muscular weakness, vomiting, tremor, etc.; no exophthalmos.



FIG. 9. Example of thyroid undergoing reversion—remission of symptoms with increasing size of goiter.



FIG. 10. Symptoms several times made worse by thyroid extract and iodine. Some exophthalmos.



FIG. 11. Very large goiter, symptoms from which now tend toward myxoedema. Moderate exophthalmos.

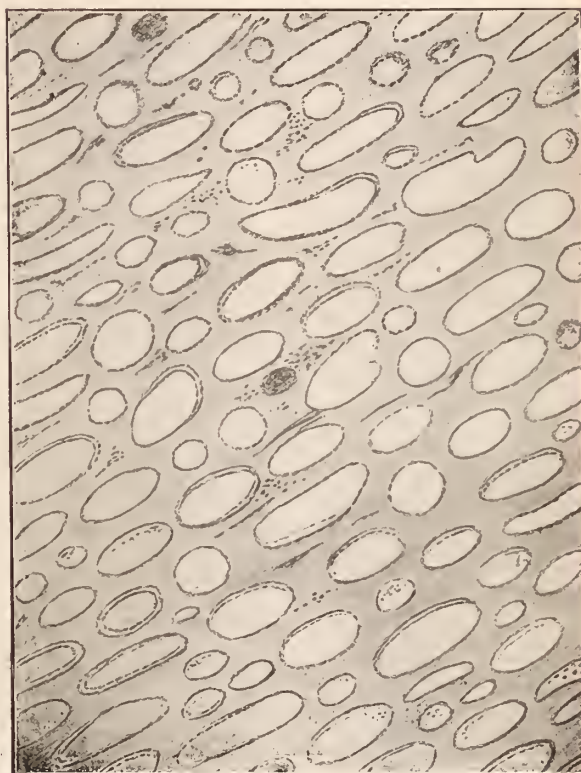


FIG. 12. Showing the histology of practically normal thyroid tissue.



FIG. 13. "Simple" goiter (colloid). From patient shown in Fig. 6.

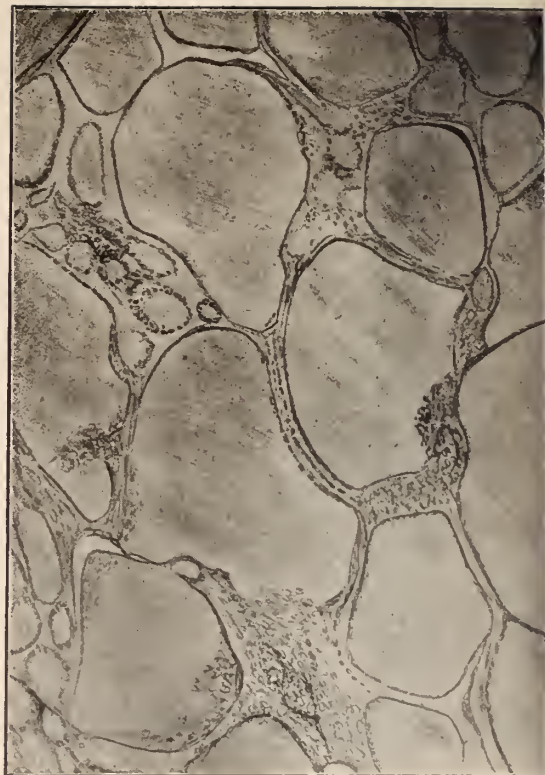


FIG. 14. "Simple" goiter (colloid).

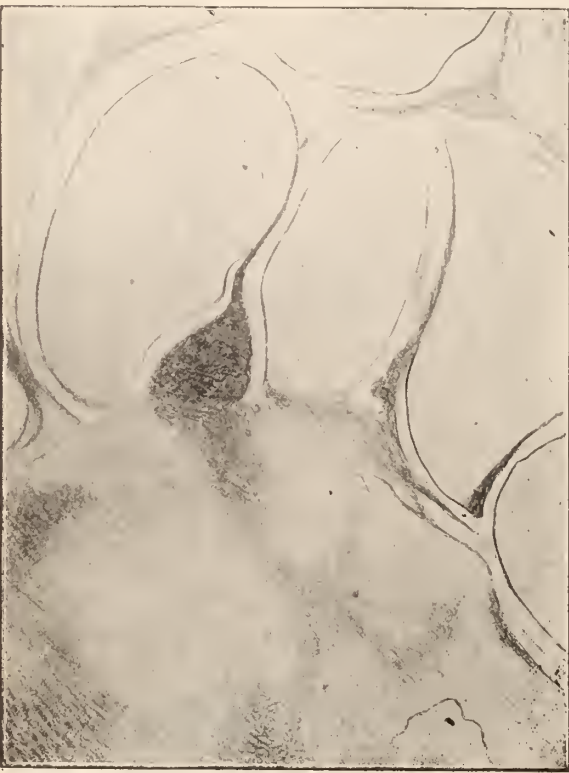


FIG. 15. From patient shown in Fig. 5 illustrating localized area in which no secretion is being formed. This condition throughout a gland would mean myxedema.

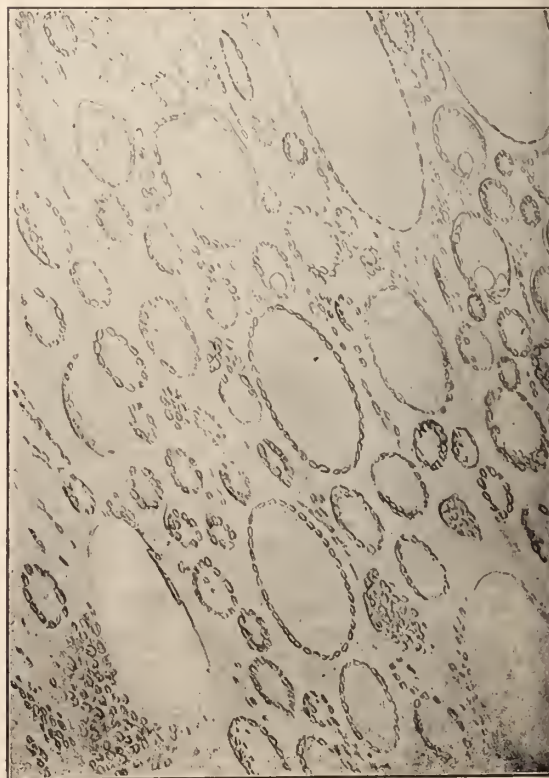


FIG. 16. Histologic picture in mild hyperthyroidism. From patient shown in Fig. 1.

it is true that these means practically invariably aggravate the symptoms. This is a fact which particularly deserves emphasis, since personally I have seldom had come to me a goitrous patient who has not previously at some time taken thyroid extract and who has not painted the enlarged neck with iodine—both usually having been done upon the advice of a physician. A few years ago, probably more than at present, the use of iodide of potash for goiter enjoyed very widespread favor; but no patients with hyperthyroidism were cured. They were rather made worse on account of the iodine. At present the most careful surgeons exclude tincture of iodine in the local preparation for operation as well as iodized catgut in the wound.

Now, what shall be said of serum treatment? Efforts to produce an efficient serum for hyperthyroidism are to be applauded. To be ideal that serum, it appears now, must do two things: first, it must by its antitoxic effect combat the undue amount of circulating thyroid product; second, it must inhibit the activity of the thyroid cells, either directly by destroying some of them (cytolysis), or indirectly in some other way. It is very earnestly to be hoped that such a serum may be obtained.

Let us note the present status of thyroid serum therapy:

(1) There is no serum which need be considered except that produced by Beebe and Rogers.

(2) For inoculating sheep in the process of making this serum it seems necessary to use human thyroids, since if the thyroids of lower animals are used antibodies soon develop in the blood of the patient, which antibodies render the serum inert; and further, these human thyroids must be fresh and normal—conditions which make it extremely difficult to get the necessary start in making the product.

(3) Moreover, Beebe and Rogers' serum has by no means been uniformly satisfactory even in their own hands, or even in a single given type of hyperthyroidism, unless one except the violent toxic exacerbations; and in these instances they say it must be given cautiously, and that it cannot be depended upon to do more than tide the patient over the acute stage; it may save the person's life by bringing her to the stage of convalescence, but beyond this other means must be adopted. It may beneficially affect other hyperthyroid patients,

but one cannot tell in advance which patients will be so affected and its administration may do positive harm.⁵

Withal, however, the work of Beebe and Rogers deserves much commendation and encouragement. It seems that the patience, the energy, the long drawn out experimentation chemically and clinically, that they have been engaged in for the past decade cannot fail ultimately to clarify the situation.

Coming finally to mention the surgical treatment of goiter, it is proper to repeat that many goiters are cured by non-surgical means, or by no treatment at all. It is even proper to say that surgery is not theoretically an ideal treatment, and that it is to be hoped that the future will reveal some measure to displace it.

Notwithstanding the above statements it is a fact beyond refutation that in the present state of our knowledge when judiciously invoked and skilfully applied, surgery affords far more favorable results than any other form of treatment, or than all other forms of treatment combined. One is certainly justified at all times in adopting the best line of procedure in the then state of knowledge respecting the cure of a given affection, whether that procedure meets all the requirements of idealism or not.

The idea that a goiter is harmless unless exophthalmos be present; that the gravity of the situation is determined by the size of the gland; that Graves' disease is a constitutional affection, and is to be treated as such with the thyroid in the background; that it is a nervous affection primarily; that it is an eye disease primarily; that operation is to be thought of only to relieve pressure symptoms; that operation is to be shouted for loudly when it has finally become evident to everybody that the patient will die without it—all these are heresies still too prevalent in the profession, to say nothing of the laity.

Surgery must do two things if it expects to vindicate its claim to a place of predominance in treatment; first, it must convince the family physician that every goiter may be a surgical trouble, and deserves to be studied accordingly; second, it must not operate on a goiter simply because it is a goiter. It is indisputably true that too few goiters are operated on; having in mind operations on goiters without

⁵Rogers and Beebe, *Annals Surgery*, December, 1909, and February, 1910; *Journal A. M. A.*, September 2, 1911.

proper study and selection, one may say that it is equally true that too many goiters are operated on.

I cannot myself ever give an opinion as to the wisdom or unwisdom of operation upon a single examination. Usually in fact, it requires several days—very often it requires several weeks—for me to feel that I have the situation sufficiently in hand to give competent advice. This is true because of (1) the varying pathology of the gland, and (2) the varying manifestations produced by the same pathology in different individuals. Failure to appreciate properly these principles and to be governed by them in giving advice is certain to discredit the surgeon and surgery.

To be more specific:

(1) A symptomless goiter (one should be very careful that it is really symptomless) appearing at puberty, for example, need not be operated on except for pressure symptoms, or for cosmetic effect, or to remove a certain undoubted tendency toward hyperthyroidism later. It should at least be given a somewhat extended chance to disappear spontaneously or to be cured by less drastic measures than surgery. The argument that it can be removed without danger is true, but is not always acceptable.

(2) A patient who has passed through a more or less typical history of hyperthyroidism, but who now exhibits typical myxoedematous symptoms, but with reliefs of hyperthyroidism, is not only a bad immediate surgical risk, but she will not be improved by any kind of operation unless it be required to relieve pressure symptoms.

(3) A woman who has a goiter with no past history of hyperthyroidism, but with present hypothyroid symptoms, will not be cured by operation. She will be injured unless all the actually functioning tissue be left.

The operative procedures are chiefly partial thyroidectomy and ligation of one or more of the sets of afferent and efferent vessels. With the technic of these procedures the members of this body are hardly concerned.

Ligation of the superior thyroid artery and veins should probably be done *en masse* and section of the ligated tissue be practiced in order that the nerve connections may be interrupted as well as the vasa lar. This procedure is usually ac-

cepted as being applicable in certain instances when the disease is beginning to manifest itself and in case of patients who are such bad surgical risks that a more extensive operation is unwise. These latter patients not infrequently so improve that partial thyroidectomy may be practiced later with comparative safety.

Discussion on Drs. Goldsmith and Jones' Papers

Dr. R. L. Miller, of Waynesboro, said he was very much interested in the subject under discussion, that of goiter, and he wished to thank both gentlemen for having presented such good papers on the subject. Personally he had never seen but one case of exophthalmic goiter that required an operation, and this patient was relieved by ligation of both arteries. He said that he had used a very simple treatment for the relief of all cases that had come to him, based upon the fact that the disease was due to hyperthyroidism, and had met with uniform success. The treatment consisted in the administration of belladonna to its fullest physiologic effect, rubbing the gland daily with an ointment of red iodide of mercury and exposing the gland to the direct rays of the sun for an hour or more. He recalled the case of a physician's wife who had been operated on for some specific trouble in one of her breasts; he had never seen a more pronounced case of Graves' disease than in this patient. Under this treatment the symptoms immediately cleared up. In only one instance was it necessary to ligate the artery, and he believed that the operation should be delayed.

NEW MEMBERS

The following members have paid their dues since the issue of the last Journal:

A. C. Colson.....	Jesup
J. M. Anderson.....	Pinedale
A. Temple	Statesboro
G. T. Ridgeway.....	Royston
W. A. Matthews.....	Hawkinsville
A. A. Smith.....	Hawkinsville
H. S. Maloy.....	Milan
D. L. Deal.....	
F. M. Sutton.....	Atlanta
V. Langford.....	Calhoun
L. S. Young.....	Moreland
R. E. Cato.....	Americus
A. H. Black.....	Thomaston

THE JOURNAL OF THE MEDICAL ASSOCIATION OF GEORGIA.

300-302-304 Harison Bldg.

SUBSCRIPTION

PRICE.....ONE DOLLAR PER YEAR

SINGLE COPIES of this calendar year, 15 cents; of the previous calendar year, also 15 cents; two years old, 20 cents; three years old, 25 cents; in other words, 5 cents additional is charged for each year preceding the last calendar year.

REMITTANCES should be made by check, draft, registered letter, money or express order. Currency should not be sent unless the letter is registered. Stamps in amounts under one dollar are acceptable.

CHANGE OF ADDRESS notice should give both the old and the new address, and state whether the change is permanent or temporary. The change notice must reach us ten days in advance of the date of the issue which is to be forwarded to the new address.

WARNING: Pay no money to an agent unless he presents a letter showing authority for making collection.

ADVERTISEMENTS.

Advertising forms go to press eight days in advance of the date of issue. In sending in copy time must be allowed for setting up advertisements and for sending proofs. No proprietary medicines can be advertised until approved by the Council. Advertising rates will be sent on request.

CONTRIBUTIONS.

EXCLUSIVE PUBLICATION: Articles are accepted for publication on condition that they are contributed solely to this journal.

CONTRIBUTIONS TYPEWRITTEN. Authors should have their contributions typewritten—double-space and with ample margin—before submitting them. The expense is small to the author—the satisfaction is great to the editor and printer. We can not promise to return unused manuscript, but try to do so in every instance. Manuscript should not be rolled or folded.

ILLUSTRATIONS: Half-tones and zinc etchings will be furnished by THE JOURNAL when satisfactory photographs or drawings are supplied by the author. Each illustration, table, etc., should bear the author's name on the back. Photographs should be clear and distinct; drawings should be made in black ink on white paper. While we cannot guarantee to return used photographs and drawings, we use our best endeavors to do so after the article is published, if the word "return" is written on the back of each.

ANONYMOUS CONTRIBUTIONS, whether for publications, for information, or in the way of criticism are consigned to the wastebasket unread.

NEWS: Our readers are requested to send us items of news of a medical nature, also marked copies of local newspapers containing matters of interest to physicians. We shall be glad to know the name of the sender in every instance.

RESOLUTION

Whereas, There appeared in the April issue of "Hearst's Magazine," under the heading "Science, by Henry Smith Williams, M.D., LL.D.," and under the subtitle "Yesterday and Today in Surgery," a statement attributing to Dr. Wm. T. G. Morton the credit of having first used sulphuric ether as an anaesthetic in surgery, his alleged first use of same being at the Massachusetts General Hospital, October 16, 1846; and

Whereas, Indisputable proof has been

presented, and acknowledged as such both in America and Europe that the distinction of being the first to make use of ether for this purpose belongs to Dr. Crawford W. Long, who performed a surgical operation at Jefferson, Ga., on March 30, 1842, using ether at that time for anaesthesia, this operation being nearly four years and seven months prior to the use of ether for the same purpose by Dr. Morton, at Boston. Therefore, be it

Resolved, By the Richmond County (Ga.) Medical Society that we protest against the assertion that to Dr. Morton is due the credit of having first used ether as an anaesthetic, since it has been clearly and indisputably proven that to Dr. Long of Georgia, is this credit due.

Resolved, That we recall with pleasure the recent public acknowledgment of Dr. Long's just dues in the unveiling of a tablet in Philadelphia, on the seventieth anniversary of his memorable operation at Jefferson, Ga., the unveiling of this tablet taking place in the presence of representative medical men of this and other countries.

Resolved, That a copy of this resolution be sent to "Hearst's Magazine" and "The Journal of the American Medical Association," with request to publish same.

EXAMINATION

Regular Board of Medical Examiners
State of Georgia
May, 1912

Passed

Atlanta College of P. & S.....	52
Atlanta School of Clinical Medicine.....	43
University of Georgia—Augusta.....	31
George Washington University.....	1
Johns Hopkins University.....	2
Univ. Col. of Medicine, Richmond, Va..	2
Jefferson Medical College.....	2
Vanderbilt University.....	1
Baltimore College, P. & S.....	1
South Carolina Medical College.....	4
Meharry Medical College.....	13
University of Pennsylvania.....	1
Howard Medical College.....	2

Failed

Atlanta College of P. & S.....	1
Atlanta School of Clinical Medicine.....	1
University of the South.....	1
Chattanooga Medical College.....	1

Meharry Medical College.....	5
University of Tennessee.....	1
Howard Medical College.....	1
Boston College, P. & S.....	1

ANATOMY

F. M. Ridley, M.D.

1. Name bones of the head. What are the Wormian bones?
2. Name articulations of occipital and of parietal bones. Name bones articulating with humerus.
3. Name divisions of vertebral column, giving number of bones in each division. What are distinguishing characteristics of cervical vertebra?
4. Describe briefly the pleura. What is contained in the middle mediastinum. Name the openings in the pharynx.
5. Locate and briefly describe the gall bladder. Give anatomical relations of appendix vermiformis.
6. Name abdominal vicera wholly covered with peritoneum. Those partly covered.
7. Give relations of womb, ovaries and Fallopian tubes.
8. Name the nerves of the special senses. Give origin of eighth and ninth pairs. In which part of spinal cord are motor and sensory nerve fibers located, respectively?
9. Give origin and insertion of biceps muscle. Locate pectoralis major and minor muscles. Give origin and insertion, respectively.
10. Name component parts of the spermatic cord. Name divisions of male urethra. Where are ureters located?

SURGERY

F. M. Ridley, M.D.

1. What is Aneurism? Differentiate between true and false sacculated aneurism. With what conditions may aneurism be confounded? Differentiate between abscess and aneurism.
2. Name the inflammatory diseases of bones. How should a case of acute suppurative osteomyelitis be treated. What is a fracture? What is a dislocation? Differentiate between fracture and dislocation. Name the two essential principles in treatment of fracture.
3. What are the symptoms of fracture of the spinal vertebra with pressnre? Give symptoms of tranmatism of about the

ninth dorsal vertebra in which the cord is entirely severed—partially severed. Under what conditions would an operation be indicated and under what conditions would it be contra indicated?

4. Differentiate between scrotal hernia and hydrocele. What is hernia? How should strangulated oblique inguinal hernia be treated? Describe an approved operation for the radical cure of an oblique inguinal hernia.

5. What is a tumor? What is an adenoma? What is an angiomata? Describe a dermoid cyst. Give indications for the removal of the mammary gland.

6. How should a dissecting wound and attendant blood poison be treated. What is the rational treatment of a suppurative abscess from its initial symptom? Give symptoms of psoas abscess. With what conditions may it be confused?

7. Define Epispadias. Hypospadias, Phimosis and Paraphimosis. What are the more frequent causes of Phimosis? Give treatment briefly.

8. Name the most common varieties of fistula. Describe briefly an operation for fistula in ano? Describe an approved operation for the removal of hemorrhoids.

9. What is shock and how treated? What agents are preferable for the production of general anesthesia? What are the contra indications to the use of the three principal general anesthetics?

10. Give differential diagnosis of coma from injury, opium poisoning, apoplexy, uremia, and alcoholic intoxication. Describe septicemia—pyremia. Give differential diagnosis.

PHYSIOLOGY

N. Peterson, M.D.

1. What is the normal temperature of the body and give two physiological reasons for increased temperature.
2. Give in detail the functions of the liver and gall bladder.
3. Name the physical properties of normal urine.
4. Locate the spleen and thyroid gland and give the function of each.
5. What is aphasia? Give the different forms, and causes of each.
6. What is the difference in the development of the motor and sensory nerves?
7. What is respiration? Name four things that happen to the blood in the lungs.

8. Describe the red and white blood corpuscles and the work of each.

9. Describe mouth, gastric and intestinal digestion.

10. Why and how should physicians co-operate with all that promotes community health.

CHEMISTRY

N. Peterson, M.D.

1. How do physical changes differ from chemical ones? Give example.

2. How can we explain the existence of several compounds of the same composition?

3. What liquid contains all the elements needed for the human body? Why?

4. What is acetic acid? Where found and how formed?

5. Give antidotes to the following poisons: (a) Carbolic acid; (b) corrosive sublimate; (c) morphine; (d) phosphorus; (e) caustic alkalies.

6. Give two tests for albumen and one for sugar in urine.

7. What are the principal constituents of normal gastric juice?

8. Describe the purification of water by distillation and by filtration.

9. How may blood stains be recognized?

10. When acids and alkalies unite, what results? Give example.

MATERIA MEDICA and THERAPEUTICS

J. W. Palmer, M.D.

1. Give treatment of syphilis.

2. Define galactagogue, sialagogue, hydrogogue, cholagogue and an anthelmintic. Name a drug as an example of each.

3. What are the physiologic effects of digitalis, and how does it differ from strophanthus? In what diseases would you administer digitalis.

4. Define Materia Medica. Therapeutics.

5. Write a prescription for a (a) collyrium, (b) a suppository, (c) the treatment of scabies.

6. Give treatment of opium poisoning. Treatment of carbolic acid poisoning. Bichloride of mercury poisoning.

7. Name five official preparations of iron; five of mercury.

8. Name three vassomotor stimulants. Three vassomotor depressants.

9. Give the treatment of an acute case of dysentery.

10. Mention three drugs that are administered internally to arrest hemorrhage. Name three to promote menstruation.

PRACTICE

J. W. Palmer, M.D.

1. (a) How would you make a diagnosis of typhoid fever? (b) What drug would you use to differentiate typhoid from malarial fever? (c) What typhoid prophylactic measures would you employ in typhoid fever? (d) How would you treat intestinal hemorrhage of typhoid fever?

2. (a) Make differential diagnosis between broncho-pneumonia and croupous pneumonia. (b) Differentiate unresolved pneumonia and pyemia.

3. (a) Differentiate between mitral insufficiency and aortic insufficiency. (b) What do you understand by broken compensation of the heart, and give treatment for same?

4. Make diagnosis of acute uremia, and give treatment.

5. Give differential diagnosis of catarrhal and obstructive jaundice, and treatment of each.

6. Differentiate tonsillitis and diphtheria, and give treatment of each.

7. (a) Give the symptoms, diagnosis and treatment of uncinariasis. (b) Is it limited to children only?

8. What is the opsonic index?

9. (a) Burns are divided into how many degrees? (b) Give treatment for burns. What complications to be looked for in burns?

10. Differentiate concussion, apoplexy, drunkenness and uremic coma.

PATHOLOGY

F. D. Patterson, M.D.

1. Differentiate pyemia and septicaemia.

2. Into how many groups are the pyogenic bacteria divided?

3. Name the groups.

4. Give example of two under the accidental group.

5. Name animal pyogenic bacteria which sometimes causes abscess of liver.

6. Definition of inflammation.

7. Name the four orders of phenomena characterizing an inflammation.

8. Why will an incised wound heal more readily than a contused one?

9. Why is a punctured wound more liable to produce tetanus than an incised one?

10. Difference between an aerobic and anaerobic bacteria?

DISEASES OF CHILDREN

F. D. Patterson, M.D.

1. Etiology, symptoms and treatment of lobar pneumonia?

3. Differential diagnosis between lobar and broncho pneumonia?

4. Symptoms, cause and management of polyomyelitis?

5. Symptoms and management of scarlet fever?

6. What is the danger of allowing a child to lie in one position when suffering with a protracted illness?

7. Etiology, symptoms and treatment of cholera infantum?

8. Symptoms and treatment of diphtheria?

9. Difference between spasmodic and true croup—treatment of each?

10. Differential diagnosis between varicella and varicella?

OBSTETRICS

C. T. Nolan, M.D.

1. Define postpartum hemorrhage. State causes, varieties and give treatment.

2. How would you manage a brow presentation?

3. Give the diagnosis and treatment of hour-glass contraction of the uterus.

4. What is placenta praevia? Give varieties, symptoms, dangers and management.

5. When is curettage of the uterus justifiable in obstetric practice, and how should it be performed?

6. Give indications for and methods of terminating pregnancy prematurely.

7. Describe the fetal circulation.

8. When and how is a repair of lacerated cervix to be performed? Of lacerated perineum?

9. What are the dangers of traction on the cord?

10. Discuss the use of anesthetics during labor.

GYNECOLOGY

C. T. Nolan, M.D.

1. Describe the female reproductive organs.

2. What is meant by plastic operation? Describe operation for perieorrhaphy and trachelorrhaphy.

3. Define caruncle of urethra and give treatment.

4. When would you use the curette? Give steps of the operation in detail.

5. What is a pelvic hematocoele? Give etiology, diagnosis and treatment.

6. What is vicarious menstruation?

7. What are Skene's glands? Give the signs of their inflammation.

8. Describe ventrosuspension and ventrofixation. Under what conditions may either operation be justifiable?

9. Give treatment of inevitable abortion.

10. Give treatment of cystitis.

EXHIBITION OF X-RAY PLATES

Meeting State Medical Association

Dr. John S. Derr, Atlanta, presented and interpreted many X-ray plates. Among them were cases of healed tuberculous, frank tuberculous of both lungs with signs of cavity on the right side, bullet in the chest, pleurisy with effusion with tuberculous combined, aneurism of the descending aorta, lung abscess with a certain amount of fibrosis present, enlarged tuberculous glands, little fluid in the chest, double aneurism of ascending and descending aorta, and plates showing several kidney stones.

Dr. C. C. Harrold, Macon, presented two or three plates showing instances of ptosis. One was a typical picture of Lane's disease or stasis. This patient had been examined for insanity. Her weight at the present time was but 72 pounds. Another picture showed this same case with the rectum full. All these intestinal cases had very long rectums.

Dr. John S. Derr, Atlanta, reported one case in which the colon was filled with bismuth by rectal tube and nothing could be told with certainty whether the rectum was redundant or not.

PEDIATRICS

W. Z. HOLLIDAY, M.D.
Atlanta

W. A. MULHERIN, M.D.
Augusta

M. A. CLARK, M.D.
Macon

A REQUEST

The collaborators in the Pediatric Department of this Journal are desirous of making their section as interesting and as profitable to the members of the Medical Association of Georgia as is possible. To do this we fully recognize the value of co-operation, and therefore kindly ask every member of the Association to help us out. This can, in a measure, be obtained by the secretary of every county society forwarding to our local collaborator, Dr. W. A. Mulherin, Augusta, Ga., all papers read before the various county societies bearing on Pediatrics.

We are cognizant of the fact that Georgia, like the majority of other States in the Union, sadly needs education along pediatric lines. It is your duty, as well as ours, therefore, to disseminate knowledge along this line, remembering that the man who knows it all in the various medical lines is a dangerous man and his only salvation is in education.

We, therefore, invite all original and personal ideas and views entertained by the various members on all pediatric subjects. Our department is wide open to you, gentlemen, write away.

SOME REMARKS ON INFANT FEEDING*

H. McHatton, M.D., Macon

At this season of the year all of us in general practice have our attention most emphatically called to the gastro intestinal diseases of children. Preventive medicine is the order of the day, and as has been proven in the past, there is a big field for prevention in this class of cases.

I can safely say that at present I do not have ten per cent. of the grave cases of digestive troubles among my own children that I had fifteen years ago, and that I often go several years in succession with-

out the loss of a child among my own people.

This is attributed solely to the education of the mothers as to the fatality of this class of disease, and especially the imperative need of cutting off food and calling in their physician upon the first indication of gastro intestinal disturbances. As we all know, what in the first few hours is a mild and safe equasion, in the course of three or four days becomes a problem, and often a fatal one.

In the past few years it has been proven scientifically and satisfactorily that we all eat from forty to fifty per cent. too much.

Now we adults naturally change our diet in the beginning of the hot season. We may not all alter the quantity of food—really most of us do instinctively—but we all alter the quality. In fact, I can safely say that no adult follows the dietary of March in May.

At the same time this natural rule, as we may call it, is not observed in children at all. They are all expected to eat as much in May as in March, and in a vast majority of cases to eat more.

When the natural instinct of the little creatures is shown by their lack of desire for their regular food in the usual quantities, the mother immediately decides that the baby is tired of the usual diet, and will not rest until she has succeeded by tempting its taste, and not its appetite, and gotten it to eat a lot of some new and unusual food, which she is usually called upon to regret when nature makes its protest.

Recognizing this condition of affairs, for years it has been my custom to advise that no change be made in any healthy child's food from the last of the cold weather until well into the heated term.

This advice, when followed, has unquestionably materially reduced the amount of sickness among my babies. When our attention is called to a point of this type in our professional work, and we find that we can get little or no help from the accumulated literature on this subject, we instinctively follow the line of

* Read before the Macon Academy of Medicine June 13, 1912.

thought until we are in a position from observation and experience to have a definite opinion on the point in question.

This I will acknowledge I have been doing for years, and am convinced that my advice of past years, whereas good, was not enough. That on the first advent of warm weather, a baby's food should not only not be changed, but should be materially reduced, and in future I shall advise my mothers to reduce the food, no matter what, or how much it is, that their babies have been taking in the latter part of the winter, on the first advent of warm weather, and I am as sure that this advice will be good, rational and beneficial as I am that the advice to modify their clothing at the same time is good.

We have had quite an epidemic of gastro intestinal diseases during the past month of May, as is usual and expected in this latitude.

I find upon reviewing my work that I have had some twenty-odd babies on my list, including those up to two and a half years old, who have had gastro intestinal attacks. All of them were taking exactly, or practically, the same food that they were taking in March. This included about all the varieties of food allowable for the various ages, from exclusive breast milk up.

In each case, a mild cathartic, temporary abstention from all food and a gradual resumption of previous food with reduction of amount, and in some instances a reduction in strength as well, has resulted in a cure, and each of them is now on the same food, reduced, that it was taking prior to the attack.

Is it not perfectly rational to presume that had the food been reduced prior to the attack in these cases, that the attack would never have occurred. Certainly no other line of reasoning seems tenable to me.

In conclusion, these few remarks are simply intended to attract your attention to what I am inclined to look upon as an important and neglected line of thought in scientifically handling our baby cases.

We all know what strides this department of medicine has made within the last few years, and many of us can recollect the time that when an infant was deprived from the mother's milk it was virtually a sentence of death, for practically all artificially fed babies, even in the best of surroundings, died.

THE MILK OF PREGNANT MOTHERS NOT POISONOUS TO HER SUCK- LING OFFSPRING

W. A. Mulherin, M.D., Augusta

It is surprising how much ignorance exists amongst the laity on the subject of the poisonous and non-poisonous condition of a pregnant mother's milk. Some few doctors, I regret to state, share in this lack of knowledge.

Naturally usually ordains that as long as a mother nurses her offspring she will not conceive. However, it sometimes happens that she does conceive. How unwise and illogical does it not appear for Nature to single out the highest type of mammalian life, and in this particular species so ordain that the nursing mother would generate a poison in her milk for her suckling offspring, if by chance she should conceive. It does not appear reasonable if ordinary common sense be applied to the question, especially when no such like condition prevails or exists in the lower mammalian type.

If we go deeper into the subject and study it from a strictly scientific point of view, what do we learn? Numerous analysis in every instance have failed to find any toxic substance in the pregnant mother's milk. There does not exist in the literature a single authentic case where a pregnant mother has ever poisoned her baby by nursing it. A scant supply and a weaker milk (lower percentage of fats and proteids) have in almost all cases been found; exactly the condition one would expect to prevail, for the recognized time for a mother to convalesce fully and re-act from a normal pregnancy is two years. If pregnancy should occur before this time the vitality and strength of the mother is taxed, and anything that taxes the mother during her period of lactation is bound to tell on the quantity and quality of her milk.

The fact that a pregnant mother's milk grows scant and weaker in quality does not justify panicky measures or hasty weaning. Mother's milk, like the milk from all mammals, has a specific enzyme that aids the offspring in digesting their mother's milk. This enzyme not only aids in digesting the mother's milk, but also helps very materially in digesting other (artificial) foods, and, therefore, is a de-

aided adjuvant in the process of successful weaning.

Repeatedly has it been demonstrated that the slow process of weaning is much safer and more successful in the pregnant mother's ease than the sudden decisive method advocated by most of our leading text-books on Pediatrics. No less an authority than Holt gives pregnancy as one of the indications for sudden weaning. Yet in his same text-book (last edition) he states that the only change found in a pregnant mother's milk is a scant supply and a weaker milk.

With these facts in hand and with the hot summer months with us and ahead of us, the slower and more conservative process of weaning cannot be too strongly advocated. Even if it takes three or four weeks before you have entirely weaned the baby, keep your nerve, reassure the mother that she will not poison her baby, and thereby prevent her from giving the baby nervous milk, which in numerous cases does upset the baby, and you will be surprised how much easier and more satisfactory your results will be.

The author, for several years has endeavored to study and analyze every case called to his attention of a baby dying from poisonous milk, nursed from a pregnant mother. The general results have been in the main about as follows: The mother nursed her baby successfully. Her menses returned one, two or three months after the birth of the baby. The menstrual periods recurred regularly for three, four or five months, and then failed to come. The mother grew nervous and believed herself pregnant. She had heard from the age of puberty that a nursing mother, if pregnant, would poison her offspring. She believed her baby was nursing poisonous milk, and grew highly nervous over it. The baby's bowels got loose and green in color from nervous milk, not from poisonous milk. Her mother was consulted, who shared in her belief that her milk was poisonous. A wise-aerie friend, who was the mother of ten or twelve children, and had only three, four or five living children to testify to her ability to rear children, dropped in, and she immediately confirmed her suspicions. Artificial feeding was imperatively decided on by the three of them. The time of weaning being most inopportune, the process sudden, the administration of improperly modified cow's milk, or the vari-

ous proprietary baby-foods, made the bowel trouble worse, and converted an intestinal indigestion to an inflammatory condition of the bowels. The family physician was called in; he only too frequently concurred in the opinion of the family that the mother had poisoned her baby, and continued along the line of artificial feeding, with the result that shortly he had to sign a death certificate.

In such cases, if the physician called in would have only reassured the mother, stopped all artificial feeding, and advised the mother to nurse her baby with absolute confidence of not poisoning her offspring, then later have weaned the baby by the slow process, he probably would have saved the baby's life and thereby helped to lower the infant mortality of Georgia.

DR. JACOBI'S A. M. A. ADDRESS

Dr. Abraham Jacobi, President of the American Medical Association for 1911-1912, delivered a most excellent presidential address before the Association at the sixty-third annual session at Atlantic City, June, 1912.

His address, like everything that Dr. Jacobi says or writes, is worthy of carefully reading and close study. His originality of thought, his bulldog determination to stick to what he knows is right and truthful, his scholarly attainments, his fifty-odd years in practice, almost entirely in pediatrics, deservedly entitles him to an authoritative position in all things pertaining to pediatrics. We might add that Dr. Jacobi, though old in years, yet young in thought, is a man far ahead of his time. This fact is gradually being recognized today, when we find that several theories advanced and practiced by him many years ago are only today receiving their due recognition of solidity and worth.

The subject of his address, "The Best Means of Combating Infant Mortality," is timely and well chosen, for infant mortality is entirely too high in this country and abroad. His advice and suggestions are aimed at vital centers, and if followed will prove more effective of accomplishing results than anything we have read to date.

We are taking the liberty of quoting freely and extensively from his address, for the reason that it is teeming with valuable information and sound advice. We would advise, however, that every physi-

cian in Georgia read his full address. It will be found in the A. M. A. Journal, Vol. LVIII, No. 23, June 8, 1912.

Dr. Jacobi says:

"When the baby is born, it wants many things; among others air and food, mostly food. Maternal milk is the only safe nutriment for the little stranger. Its quality is not much influenced by emotions, cares, worries occasionally, only, by medicines taken by the mother, or rarely by her average food. Its quality is only temporarily altered by menstruation, and never causes a change that justifies the interposition of artificial feeding. The daily quantity is rarely less than a quart. Maternal affection, the wish to nurse, the act of suckling increases the quantity. There is no such thing as absolute absence of milk secretion. Essential alterations in the articles consumed by the nursing woman are not demanded. As her appetite is mostly increased, she is entitled to so much more than her average consumption as is required by the one or two pounds needed by her baby. She may eat and drink what she digests and was used to; she may perform her duties, attend to her labors—even some factory work—and fill her time as her station in life suggests. There is no reason why she should not spend time in shopping, concerts, theaters, lectures and parties, except the dog parties, reminding you of 1790—even suffrage parades—provided she will not forget that she has a baby at home to welcome and feed. The checking of babies, with or without baby carriages, by department stores, is a convenient innovation, which improves the chances of babies, women and merchants alike. Elections are no longer so exciting, dangerous, or murderous as they were in our large cities as late as twenty or thirty years ago—so there is no objection to woman suffrage, whether it be considered a plaything, a civic duty, or a disease. Even so, there is no danger, for infectious diseases in the mother are no contra-indication to nursing, unless it be a small-pox case in an antivaccinationist; for not injurious bacteria but beneficent antibodies pass into the milk and improve the baby's power of resistance. All of these considerations prove the dangerous tendency of those of our colleagues who in their mistaken subserviency to the ignorant suggestions of fashionable and lazy ladyships fall in with their and the dairyman's teaching that cows are their proper God-

sent substitutes. These accommodating friends of ours are, through short-sighted complacency, enemies of the race.

The mother's milk has certain protective properties not possessed by any artificial food or the milk of another animal. Experiments have proved that the latter may propagate the artificial immunity toward certain vegetable poisons—the ricin and abrin; and a wet-nurse may immunize her nursling by being herself immunized through diphtheria antitoxin. So the mother who ever was thoroughly infected with scarlatina or measles will, at least for the time she is nursing her baby, protect the latter against those infections. The infected milk of an animal will not have that effect; immunity is secured only by the milk of the same—that is, the human animal—which proves that we are superior to our animal brethren and sisters; unfortunately, only so long as we are young. Many of us when we lose our infancy lose our superiority.

The attentive doctor and the diligent midwife know that our women, poor and rich, suffer from no organic mammary degeneration. Large and small breasts can be educated into competent milkers. They can be roused into action after days and weeks of comparative inactivity, and into renewed efficiency after a recess of one or more weeks. It is quite well known, what I alluded to, that the very suckling of the baby is the best educator of the breast. That is why, for the hundreds of thousands of mothers, the doctor should be the oracle; the midwife of the people, with her future education and her diligence, the trainer. Both should remember, or rather, learn that a better milk-supply is guaranteed by not improperly and untimely straining the breasts' function. You do not milk a cow every two hours. A healthy new-born baby should never have the breast more than once every three hours; after the third month, he must get along with five meals in twenty-four hours, and he will turn out a baby worth having.

Milk contains substances organic chemistry never discovered or measured. They are the **ferments** which circulate in the blood. Some aid in the digestion of albumin; others, of fat and starch. Besides, there are defenders in it of the circulating blood; the **alexins** (Hans Buchner) destroy bacteria; agglutinins immobilize bacteria by bunching them; antitoxins formed in the infected vigorous animal de-

stroy the poisonous toxins of the bacteria. When they are not sufficient—for instance, in bad cases of diphtheria—we inject antitoxins formed in the blood-serum of another animal—for instance, of horses. Any mother that ever had a mild or bad case of diphtheria—or, for that matter, certain other infectious blood diseases—accumulates some antitoxins in her blood and tissues and in her future milk, and thus protects both it and her nursling. It is possible that so long as the infant is at the breast it is for that very reason less liable to take diphtheria. The fact is that few babies of the first half year become diphtheritic. That is the period of nursing at its mother's breast—its mother's, or another human female's, not, however, that of another animal. It is not chemistry alone, but also biology, which distinguishes the milk of their organic producers. Old Doctor Heim was told by a so-called 'noble' mother: 'I keep an ass for my baby. Ass's milk is as good for my baby as my own would be, is it not?' 'Yes, yes,' said the old man, 'just as good for young asses.'

In Berlin half of the babies were breast-fed in 1890; in 1900, only one-third of them. At the same time, another German town, Barmen, nursed four-fifths of its babies—during one year, 99 per cent. Of 575 starving and neglected women in a Berlin institution, 83.3 per cent. could nurse their infants; why? They were better fed than before, and gave up only when the Moloch of industry reclaimed them as victims. After these poor babies had enjoyed the privileges of some of the rich—viz., health and life—they were sacrificed again on the altar of anti-social circumstances. For during the first year of life, of 1,000 breast-fed babies seventy have died; of the artificially fed, 270 up to 430. They have been counted by the statisticians, by the parents and by the undertakers.

Wittingly or unwittingly, surely not meaning it as a grotesque joke, the Nestle Food Company has a picture on the cover of their circular. It represents a woman with immense wings—perhaps meaning an angel—flying off with two babies to unknown parts.

The mortality of babies below one year has been found—not estimated—to be, for the exclusively breast-fed, 6.98 per cent.; for those brought up on a mixture of breast-milk and artificial food, 9.87; for

those fed artificially, 19.75. That means that somebody or something is to be held responsible for the deaths of thirteen babies who should live in good health and with good prospects. Babies turned over to milk stations, because their mothers are told to 'rest' may easily belong to that class. It is true, not every baby can be nursed, but the exceptions are scarce. One was born of a mother who died of sepsis carried in part by a dirty midwife or by an infected or ignorant doctor. That is true, statistically, even now that other doctors boast of their asepsis. My own past life does not class me among those others. So I may plead guilty, and no one has a right to blame me for exaggerations. I am, or have been, in the same boat with some of you. Of the five hundred tracheotomies I performed before the Listerian era, of a thousand I assisted in, of thousands of scarlatina, measles, erysipelas during epidemics, and even hospital gangrene during war times—too many occurred while soap and water existed without being used at the proper time and in the proper places. We did not know better, but you do. Every case of death of sepsis in the mother should burn hell into the conscience of whoever permits it nowadays; every case of death from lack of breast-milk should cause a trial for homicide against a doctor or midwife, or mother. For the latter, it is true, there are, if not excuses, many explanations. Some mothers must get up after three days to do washing and scrubbing, and do it without a sufficient quantity of food—starving women make no milk—must make a scanty living in the factory, or in a small business; others go to afternoon teas and bridge parties, or have been taught by their fashionable doctors, who agree with them in their suggestions, that modern science has proved that a woman's udder may be replaced by a cow's bosom, that a milk laboratory's clerk will furnish printed schedules for the modification or alteration or substitution of food adapted for every month of an orderly Fifth Avenue infant.

But after all, truth will crop out. There is rarely a woman who cannot nurse her infant.

Ignorance can be learned from and taught by doctors, by midwives, by nurses but ripe wisdom also. As half of our babies in all countries, are born under the supervision of midwives, it is these who,

when their education will no longer be so hopelessly neglected as in our country, in their more intimate contact with the people can exert the widest influence. They will best overcome the prejudice which derives from the well-clad people the notion that breast-feeding is no longer fashionable; they will prepare the nipples, teach cleanliness and anti-sepsis such as they have been taught in the schools of the—I hope—near future. Edith Peiper reports an increase within five years of from 55.7 to 72.5 per cent. of women who gave exclusively breast-milk to their babies in a public institution.

In a large midwifery school of Germany (Stuttgart), the percentage of women who nursed their babies increased from year to year under proper treatment and teaching. Of one hundred women, only 22 to 25 per cent. gave their babies breast-milk to the exclusion of other foods before 1884. Exclusive breast-milk feeding was furnished by 41.1 per cent. in 1884; 61.4 in 1887; 84.3 in 1888; 100, in 1902; 99.5 in 1903. All of these women were poor or in very moderate circumstances, but they were looked after and fed before confinement and after. It takes missionary work to accomplish results of that nature.

In our country, it is calves that are looked after by our government. The babies have no votes yet. They will wait.

I must give you a few more figures, though I may bore you. But I have more sympathy with the world's babies than even with you. I want every incredulous Thomas to leave this place convinced that every baby has not the right to suck a mother, but also the facility.

Dietrichs reports the mortality statistics of 628 infants of the poorest married women of Cologne. Of 100 children born alive, three of those who were nursed for nine months or more died before the end of their first year; of those nursed from three to nine months, twelve; less than three months, thirty-five; of those who were fed artificially, forty-seven. Forty-seven dead out of 100 born alive, in one year.

Perhaps a report by Prinzing is equally convincing in connection with the mortality of other than intestinal diseases. During the years 1895 and 1896, the mortality of Berlin babies under one year, when breast-fed, was 7.09; when fed artificially, 38.6. Of 1,000 babies, congenital debility killed 14 of the breast-fed; 43.6

of those raised artificially. Of 1,000 babies—

	Breast-Fed	Artificially-Fed*
Bronchitis and pneumonia....	5.6	39.6
Gastro-enteritis killed	12.2	171.0
Atrophy and marasmus.....	2.0	24.0
Convulsions	11.16	42.0
Pertussis and diphtheria.....	8.3	19.5
Other diseases	17.2	46.4

*Alfred von Lindheim, *saluti juventutis*, 1908.

The illegitimate infants fared much better than the legitimate ones. That sounds paradoxical, but the former, when controlled by the authorities, were obliged to nurse their babies; the latter were the babies of the mothers who returned to domestic and factory work, and were exposed to neglect and early and improper artificial feeding, mostly by strangers. Among living infants of the second year, the proportion is reversed, for obvious reasons. The lessons to be derived from these facts are intelligible. A social improvement of the mothers, but that only, will add to the chances of the infant population.

Boek found that of infants who died of intestinal diseases, 61.4 per cent. were fed on flours; 24.3 per cent. on cow's milk; 15.8 per cent. on a mixture of breast-milk and cow's milk, and 1.4 per cent. on breast-milk.

During the siege of Paris (1870-71) the women were compelled to nurse their own babes, on account of the absence of cow's milk. Infant mortality under a year fell from 33 to 7 per cent. During the cotton crisis of 1860 there was a famine. Men and women starved, and on account of no money for artificial food, the women nursed their babies. One-half of their mortality disappeared. In the poor forest districts of the Westerwald the bottle-fed babies had a mortality of 20 per cent.; the breast-fed babies, one of 8 per cent.

In the Berliner klinische Wochenschrift (No. 28, 1911), Professor Franz publishes the report of the gynecologic divisions of the Charite. One hundred per cent. of his puerperal women nursed their babies. Dr. Kahn accomplished mostly the same results.

It is true that private practice does not reach the same number. Among the well-to-do, with better surroundings, better food, more rest, but greater indolence, less sense of responsibility, more money to throw away and more accommodating doctors to amuse them, and with more money

with which to buy inferior food, the percentage of nursing women is smaller. Their daughters will know better, provided the doctors—we and our successors—will teach them.

Now, my friends, you have been kind to me and patient, as hundreds of times before. That is why I shall now finish in a minute with a few conclusions for those who, with me, are convinced that healthy women and living vigorous infants are the best possessions of this nation. They will not be conquered with treasures and cannon and corpses of countless men; they need conservation only. What I want is that a pregnant woman should be in a condition to carry her fetus to its legitimate end in health and vigor, and be able to nurse her infant. Every text-book talks to us of the inability of women to do so, and indicates formulas and tradeships and factories from which to graduate toothless young Americans. One hundred per cent. of our women, however, can be made to nurse, even the 'flower and fashion' of the land. From two to three times as many babies will live when breast-fed compared with the number of those whom they complacently try to raise on artificial foods. By breast-feeding you will save 100,000 babies that now die or become invalids, from no other cause but unnatural feeding.

Dangers which now attend the process of parturition for more than one-half of the women of this country must be modified, relieved or removed by the presence of a person instructed to conduct a normal labor and, when needed, to call timely aid. We want, for the benefit of the women who need midwives, 200 midwifery schools after English or German pattern. Let no Legislature of any State pass without a bill or law to safeguard the newcomers and their mothers.

A town without an ample supply of good doctors and midwives and a village without one or two competent and responsible and licensed midwives, are like a tenement house without a fire-escape or a Titanic without life-boats."

MULHERIN.

Dr. Ladd, in the May Archives of Pediatrics, reports a clinical study of "eighty-two infants with varying grade of indigestion and malnutrition" and concludes as follows:

(1) As a result of the study of eighty-

two infants with varying grades of indigestion and malnutrition, one may conclude that many atrophic infants can be educated to take higher percentages of fat than are ordinarily given, with satisfactory results in weight development.

(2) The average rate of gain in atrophic and undeveloped infants who are fed upon whey mixtures with lactose for prolonged periods was eighteen ounces per month. When malt sugar is substituted in these mixtures for milk sugar, the rate of gain is increased to 22-23 ounces per month, or an increase of 26 per cent.

(3) Two series of infants were fed upon plain cream mixtures with barley starch and the excess of sugar was supplied in the form of maltose (maltose and dextri-maltose). In one group the mixtures were not pasteurized; in the other group the food was superheated to a temperature of 212° F. for twenty minutes. The rate of gain in each group was the same; that is, 21¼ ounces per month. Boiling the milk did not in any way lessen its nutritive qualities. The possibility of scorbatus was guarded against after several weeks of feeding by small daily doses of orange juice. Individual cases often did better upon the superheated than upon the raw milk.

(4) With an occasional exception the infants did not make satisfactory gains in weight until the energy quotient was raised to 140 to 160 and sometimes to 175 to 190. Generally speaking, the energy quotient is greatest when the weight development is farthest from that of the average normal infant, as determined by the weight chart.

(5) The quantity of food to be given an atrophic infant is only a little less than that which the normal infant of the same age receives, and is often from 1½ to 2 ounces more than would be given to the normal infant of the same weight.

(6) The detailed study of the weight and feeding charts in a large series of cases shows great variation in the individual requirements and the impracticability of applying general rules of feeding to the atypical and difficult cases.

CLARK.

SODIUM BENZOATE IN ARTIFICIALLY-FED INFANTS

Clifford Grulee and Walter Buhlig (Archives of Pediatrics, 1911, XXVIII, 849) determined the general action of sodium

benzoate on the bacteria in milk, and studied the effect of the drug in artificial milk mixtures. They used one part of milk as a control, one part contained sodium benzoate 0.1 per cent., and one part contained 1 grain of benzoate to every 6 ounces of milk. The milks were plated every twenty-four hours, and the bacteria counted per cubic centimeter. From these experiments they deduced that with 1 grain of the benzoate to 6 ounces of milk (0.04 per cent.), or in 0.1 per cent. strength, the number of bacteria in milk does not differ materially from the number in control milks; that sodium benzoate in the above strengths has a slight inhibitory effect on some bacteria; that sodium benzoate is a fair preservative only when few living bacteria are present. The clinical observations consisted in administering sodium benzoate in one-half and one-grain doses in each feeding to infants on artificial mixtures. Some of the infants showed before and during the benzoate administration malnutrition, rickets, gastro-intestinal disorders, and tetany. Grulee and Buhlig give complete histories of nine cases, including milk formulas, treatment, and results. They conclude from these observations that sodium benzoate to the amount of $2\frac{1}{2}$ to 5 grains in twenty-four hours in artificially-fed infants, ranging in age from a few weeks to almost two years, produces no recognizable symptoms, even though these children may be suffering from gastro-intestinal disturbances of a serious nature. CLARK.

COLON IRRIGATION: THE SHORT VS. THE LONG TUBE

Henry T. Maschell (*Archiv. f. Pediatris*, 1911, XXVIII, 837) prefers the short rectal nozzle to the rubber catheter in giving colon irrigations to children. Some of the objections to the rubber catheter are that it often kinks, shutting off the flow; that it curls on itself, and the tip appears at the anus; that it causes more irritation and discomfort, since it must be introduced by a series of pushes or shoves, and that traumatism to the mucous membrane is possible if the catheter is stiff or carelessly inserted. The small nozzle, on the other hand, is easily inserted and gives a minimum of anal irritation. It is also practically safe to be used by untrained attendants. Maschell gives an analysis of 200 consecutive irrigations on

infants, comparing the short nozzle and the rubber catheter alternately. The analysis shows that for the "amount injected" the short nozzle had the advantage and that it was retained for a longer time with the short nozzle. The fluid can be made to reach the cecum by using the short nozzle, and the irritation and discomfort is less than with the catheter. CLARK.

THE OWEN BILL

The Owen bill has had hard sledding in Congress in spite of the elimination of the objections raised by the *antis*. Every effort has been made to simplify the bill but objections are pouring in in larger numbers than endorsements.

A few telegrams or letters that have been sent in by irresponsible and unthinking people have influenced congressmen more than the endorsements of many county and State associations. The only way to meet this opposition is to bombard senators and representatives with telegrams and letters urging the passage of this bill.

As usual, the medical profession is slow and indifferent when it comes to a conflict between Christian Scientists, leagues for medical freedom, osteopaths, and the regular medical profession. Even if all the men who attend the Atlantic City meeting were to sign a petition in favor of a bill to protect the health of the people, a few outside protestants could kill its effect upon congressmen.

A compromise bill has been offered, but it is quite likely to be talked down or discarded for fear of hurting someone's feelings.

It was thought at one time that Christian Science Senator John D. Works, of California, was convinced that the health bills were a good thing, but he and others cast slurs or doubts upon them or at least delay legislation to such a degree that the outcome is discouraging.

Senator Smoot has a bill creating a public health service to be precided over by an assistant to the Secretary of the Treasury. This will include the Public Health and Marine Hospital Service and make it subservient to a department which should not have anything to do with public health. Perhaps this compromise would be a step in advance and ultimately work into an independent department.—*Journal-Lancet*.

TUBERCULOSIS

C. H. RICHARDSON, M.D.
Montezuma

T. E. OERTEL, M.D.
Augusta

J. H. HAMMOND, M.D.
LaFayette

THE STATUS OF THE ANTI-TUBERCULAR CRUSADE IN GEORGIA

T. E. Oertel, M.D., Augusta

It is always gratifying to note progress. In educational movements of magnitude one is apt to become discouraged because results are often not apparent as soon as was hoped for by the more sanguine and co-operation is not forthcoming from quarters from whence it was with reason expected. One must, however, not lose sight of the fact that great reforms do not crystallize rapidly. Whatever may be the appearance of such a condition, if analyzed it will be found to be fallacious.

There must always precede a preparatory process. The seed must be planted and be given time to germinate before the green sprout may be looked for, and after this there must be lapse of time coupled with proper husbandry before fruition. Bearing this in mind we may take to ourselves some degree of comfort relative to the advance in the fight in Georgia against tuberculosis. By comparison with what has been done elsewhere we have not much to be proud of, but by comparison with the conditions that confronted us ten years ago we may see cause for hope of ultimate results of moment.

It is not my purpose to review in detail either the former or the present conditions, but only to point to some progress as earnest of what is not only possible, but sure to follow, for momentum will be gained as time goes on and the rolling ball gathers to itself added material. Ten years ago not only the laity, but the medical profession of Georgia as well, was profoundly ignorant upon even the cardinal features of tuberculosis.

It was rare to find a doctor who was capable of making a correct diagnosis until hectic flush, emaciation and cough had reached a degree that proclaimed a second or even a third stage of pulmonary phthisis. The condition of the patient was ascribed too often to "indigestion" or

"malaria," and even when the correct diagnosis was made it was considered culpable to inform the patient of the true condition for fear of frightening him. "Treatment" usually consisted of dosage with cod liver oil and cresote, two fetishes which joining hands with ignorance, made a mystic trio that conducted the unfortunate victim expeditiously to the grave and rendered all too true the dictum of Jacobi that "the diagnosis of tuberculosis is a meditation upon death."

Of course, with such a condition in the medical profession only a worse one could exist with the people at large. The consumptive was shunned as one with the plague; he was considered as one already dead; the inscription that Dante saw above the gates of hell was none the less certainly applicable to him—"Abandon Hope!"—and this was no longer than ten years ago!

Whatever forces may rightly be given credit for it matters little, except to shape future action. The fact which now confronts us is that much of this condition of things is changed for the better.

The medical profession is no longer asleep. Not nearly so often is the malady in its early stages overlooked; in other words, diagnostic measures have been improved and we are constantly on the outlook for the first symptoms of this, the most common of all serious diseases, and are ready to meet it with enlightened methods of treatment, while creosote and liver oil have, figuratively speaking, been dumped into the sea, much to the relief of poor human stomachs—though, as Oliver Wendell Holmes pointed out, it may be hard on the fishes.

More than this, the public, too, has learned things. Now it is demanded of the doctor that he make an early diagnosis because then there is chance, and good chance, of recovery.

The consumptive is no longer shunned with the same unreasoning fear of old and the evangel of "Rest, fresh air and good food" as essentials to the tubercular is almost as well known as that of "Peace on

earth, good will towards men," and perhaps quite as well followed.

For these reasons it seems we have cause for congratulation. We must not for a moment allow such congratulations to be egotistic, however, for alas, had we done our full duty so much more might have been accomplished by now. But **stimulating** they may be, only this, **not laudatory**.

If this much has already been done, even though the **much** be really **little**, yet is it shown thereby to be possible to do more. A beginning has been made—the end?—ah, that lies beyond the hills. Let us gird up our loins and with stout heart **march on** more heedful that we set foot aright and avoid the slips that have hitherto let and hindered our progress towards the higher realms of achievement. Only by sustained effort are they attainable. In the words of sturdy Thomas Carlyle, Frisch zu, bruder!

TINCTURE OF IODINE APPLICATIONS TO THE PERITONEUM FOR TUBERCULAR PERITONITIS

Dr. A. Hoffmann (Munch. Med. Wochensh., No. 10, 1912), recommends painting the tubercular peritoneum with tincture of iodine.

Animal experiments show that painting the normal peritoneum with tincture of iodine produces a strong reaction as indicated by profuse transudation and adhesions.

The simple hyperaemia of the peritoneum produced by laparotomy and also by hot air and the X-ray does not occasion a reaction of sufficient intensity in many cases.

If a coil of intestine be painted with tincture of iodine it at first becomes brown and loses its lustre, but soon the color changes to a bright red. In the dry form of tubercular peritonitis the application of tincture of iodine may produce a serious transudation in a few hours with rapid formation of adhesions. In the normal intestine adhesions are to be dreaded, but in tubercular peritonitis the author regards them as harmless.

Hoffmann reports four cases, all of which rapidly recovered. The applications were made both to the visceral and parietal layers.

Within the first forty-eight hours following the application there was a chemotactic peritonitis without any fever of tympanites, but this rapidly subsided.

The average time of treatment was four weeks, when recovery seemed assured.

T. E. O.

A DIAGNOSTIC TENDER SPOT IN PULMONARY TUBERCULOSIS

Dr. S. T. Harris (The Journal A. M. A., June 8, 1912, p. 1747), believes a diagnostic point of value is a tender spot occurring on the affected side or on the more seriously affected side in pulmonary phthisis and which he describes as follows:

"This spot is located immediately above the tip of the superior angle of the scapula at the insertion of the levator anguli scapulae. The trapezius muscle also covers it.

"It may be found by palpating the tip of the superior angle of the scapula with the finger and riding over it with more or less inward pressure. It is best to palpate both sides at the same time, exerting the same degree of pressure, but not enough to produce pain in a normal individual. The pain may be quite severe, causing the patient to object or wince, or it may differ only in degree from that on the opposite side. Ordinary myalgia and neuritis, as well as rheumatism, must be excluded."

He believes the method original and of value.

T. E. O.

The more money The Journal of the Medical Association of Georgia makes out of its advertisements the less it costs the State Association to run the paper. This means that every member of the State Association has an interest in the advertising columns. If one business firm advertises and another does not, patronize the one that does. It is money in your pocket.



REGULINE

as an addition to
DAILY FOOD
is an ideal way to prevent
AUTOINTOXICATION
by
ELIMINATION.

Sample & Literature
on request.

The Reinschild Chemical Co., 71, Barclay Str., New York City.

RATES FOR REPRINTS

100.....	\$1.00 per page
200.....	1.25 per page
500.....	1.50 per page
1000.....	2.00 per page

Covers to count as four pages when ordered.

The Journal is owned and published by the Association, and all profit goes to make it better. Each member of the Association is financially interested in the Journal to the same extent as every other member, and each member is rightfully anxious for the financial success of the publication.

The greater this financial success, the greater the practical value can be made to the individual member, and hence the greater the value as an advertising medium.

Our advertisers, by their patronage, help to support the Journal, and make its successful publication possible. In return they expect, and rightfully, a fair return for their money. Every dollar spent by a member of the Medical Association of Georgia with advertisers in our Journal, in preference to non-advertisers, is a dollar spent in advancing his own personal advantage, for he has contributed something indirectly to the betterment of his own property.

The Journal cannot exist without the advertisers and their good will.

The advertisers cannot continue in business without the patronage of the medical profession.

The medical man cannot continue in business without the supplies for sale by the Advertisers.

The interests of all are identical—the profession must depend upon the manufacturers, etc. The manufacturers, drug houses, etc, must depend upon the more progressive and more successful physicians. The interests of both are best served through the official Medical Journal—the Journal published by the profession in its own best interests, scientifically and ethically.

ADVERTISING RATES

1	Page 1 year.....	\$150.00
$\frac{1}{2}$	" 1 "	87.50
$\frac{1}{4}$	" 1 "	50.00
$\frac{1}{8}$	" 1 "	33.00
$\frac{1}{16}$	" 1 "	25.00
1	Page 6 months.....	87.50
$\frac{1}{2}$	" 6 "	50.00
$\frac{1}{4}$	" 6 "	33.00
$\frac{1}{8}$	" 6 "	25.00
$\frac{1}{16}$	" 6 "	20.00
1	Page 3 Months.....	50.00
$\frac{1}{2}$	" 3 "	33.00
$\frac{1}{4}$	" 3 "	15.00
$\frac{1}{8}$	" 3 "	10.00
1	Page 1 month.....	25.00
$\frac{1}{2}$	" 1 "	15.00
$\frac{1}{4}$	" 1 "	10.00
$\frac{1}{8}$	" 1 "	7.50

These rates do not apply to cover pages, space next to reading matter, or matter requiring to be reset.

Adrenalin in Hay Fever



In the treatment of vasomotor rhinitis—or hay fever, as the disorder is better known—Adrenalin is one of the most satisfactory agents at the command of the practitioner. While not a specific in the strict sense of the word, it controls the symptoms very effectually and secures for the patient a positive degree of comfort.

Solution Adrenalin Chloride and Adrenalin Inhalant

are the preparations most commonly used, being sprayed into the nares and pharynx. The **Solution** should be diluted with four to five times its volume of physiological salt solution. The **Inhalant** (preferred by some physicians because of its oily base, which imparts an emollient effect and renders the astringent action more enduring) should be diluted with three to four times its volume of olive oil. Both are effectively administered by means of our Glaseptic Nebulizer.

Supplied in ounce glass-stoppered bottles.

THE GLASEPTIC NEBULIZER.

This is confidently believed to be the most practical atomizer ever offered to the medical profession. It combines asepsis, convenience, efficiency and simplicity. It is readily sterilized, the working parts being *one piece of glass*. It produces a fine spray and is suited to oils of all densities, as well as aqueous, spirituous and ethereal liquids. Price, complete (with throat-piece), \$1.25.



Write for our Literature on Hay Fever.

PARKE, DAVIS & COMPANY

Laboratories: Detroit, Mich., U.S.A.; Walkerville, Ont.; Hounslow, Eng.

Branches: New York, Chicago, St. Louis, Boston, Baltimore, New Orleans, Kansas City, Minneapolis, Seattle, U.S.A.; London, Eng.; Montreal, Que.; Sydney, N.S.W.; St. Petersburg, Russia; Bombay, India; Tokio, Japan; Buenos Aires, Argentina.

The Journal of the Medical Association of Georgia



Published Monthly under Direction of the Council

Editorial and Business Office—300, 302 and 304 Harison Building.

Subscription Price, \$1.00

Entered as second-class matter, August 4, 1911, at the Post Office at Augusta, Ga., under the Act of March 3, 1879.

Vol. II

AUGUSTA, GA., AUGUST, 1912

No. 4

CONTENTS AND DIGEST.

ORIGINAL ARTICLES

The Importance of a Correct Diagnosis of Skin Lesions and Exhibition of a Case of Dermatitis Herpetiformis. By Cosby Swanson, M.D., Atlanta.....	99
The Treatment of Pulmonary Tuberculosis by Compression of the Lung. By S. T. Harris, Highlands, N. C.....	104
The Diagnosis and Home Treatment of Tuberculosis. By W. B. Hardman, M.D., Commerce.....	112
The Present Status of Specifics in the Treatment of Tuberculosis. By E. C. Thrash, M.D., Atlanta.....	114
Discussion on Drs. Harris, Hardman and Thrash Papers.....	117
Tuberculin Not Even a Placebo. By J. Monroe Anderson, M.D., Pinedale.....	121

BOOK REVIEWS

Surgical After-Treatment	122
Infant Feeding	122
Pullagra	122

EDITORIALS

Medical Practice Bill	123
The General Assembly	127
An Organizer in the Field.....	127

PEDIATRICS

Pediatrics is Entitled to More Careful Study.....	128
Pure Culture of the True Bacillus Lactis Bulgaricus in the Treatment of Intestinal Diseases of Infancy.....	129

OBSTETRICS

Too Hasty Ligation of Umbilical Cord.....	132
Hemorrhage into the Peritoneal Cavity Caused by Accidental Rupture of the Ovary.....	132

TUBERCULOSIS

The State Tuberculosis Sanitarium.....	133
A True Story.....	134

MISCELLANEOUS

New Members Since Last Issue.....	127
Georgia Homeopathic May Report.....	127
Plague in Porto Rico.....	131
First District Medical Society.....	131
Twelfth District Medical Society.....	134

OFFICERS

President.....	W. W. PILCHER, M.D., Warrenton
First Vice-Pres.....	J. W. PALMER, M.D., Ailey
Second Vice-Pres.....	T. H. HALL, M.D., Macon
Sec.-Treas.....	W. C. LYLE, M.D., Augusta

COUNCILORS

First Dist.—	J. Lawton Hiers, M.D.....	Savannah
Second Dist.—	Gordon Chason, M.D.....	Bainbridge
Third Dist.—	V. O. Harvard, M.D.....	Arabi
Fourth Dist.—	C. L. Williams, M.D.....	Columbus
Fifth Dist.—	J. N. Ellis, M.D.....	Atlanta
Sixth Dist.—	J. A. Combs, M.D.....	Locust Grove
Seventh Dist.—	W. P. Harbin, M.D.....	Rome
Eighth Dist.—	I. H. Goss, M.D.....	Athens
Ninth Dist.—	W. B. Hardman, M.D.....	Commerce
Tenth Dist.—	W. J. Cranston, M.D.....	Milledgeville
Eleventh Dist.—	A. G. Little, M.D.....	Valdosta
Twelfth Dist.—	E. T. Coleman, M.D.....	Graymont

VICE-COUNCILORS

First Dist.—	A. J. Mooney, M.D.....	Statesboro
Second Dist.—	C. K. Sharpe, M.D.....	Arlington
Third Dist.—	A. G. Crittenden, M.D.....	Shellman
Fourth Dist.—	T. S. Bailey, M.D.....	Newnan
Fifth Dist.—	F. K. Boland, M.D.....	Atlanta
Sixth Dist.—	R. H. Stovall, M.D.....	Macon
Seventh Dist.—	J. H. Hammond, M.D.....	LaFayette
Eighth Dist.—	E. G. Adams, M.D.....	Greensboro
Ninth Dist.—	J. S. Tankersley, M.D.....	Ellijay
Tenth Dist.—	G. L. Carpenter, M.D.....	Wrens
Eleventh Dist.—	J. G. Tuten, M.D.....	Jesup
Twelfth Dist.—	M. L. Currie, M.D.....	Vidalia

STANDING COMMITTEES**Scientific Work**

E. E. Murphey, M.D., Chairman.....	Augusta
V. H. Bassett, M.D.....	Savannah
W. C. Lyle, M.D., ex-officio.....	Augusta

Medical Defense

M. A. Clark, M.D., Chairman.....	Macon
J. N. Ellis, M.D.....	Atlanta
E. T. Coleman, M.D.....	Graymont
J. G. Dean, M.D.....	Dawson
E. G. Jones, M.D.....	Atlanta

Organization

T. J. McArthur, M.D., Chairman.....	Cordele
G. R. White, M.D.....	Savannah
W. B. Hardman, M.D.....	Commerce

Public Policy and Legislation

J. R. Littleton, M.D., Chairman.....	Augusta
W. L. Champion, M.D.....	Atlanta
C. C. Harrold, M.D.....	Macon
President and Secretary, ex-officio	

Necrology

V. D. Lockhart, M.D., Chairman.....	Maysville
W. B. Emery, M.D.....	Atlanta
S. S. Smith, M.D.....	Athens
M. F. Carson, M.D.....	Griffin
J. M. Hull, M.D.....	Augusta

Arrangements

(Committee to be selected by the Chatham County Society)

Delegates to American Medical Association

W. H. Doughty, M.D.....	Augusta
E. G. Ballenger, M.D. (alternate).....	Atlanta
T. J. Charlton, M.D.....	Savannah
T. R. Wright, M.D. (alternate).....	Augusta

COLLABORATORS**History of Medicine**

J. B. Baird, Sr., M.D.....	Atlanta
L. G. Hardman, M.D.....	Commerce
T. R. Wright, M.D.....	Augusta

Medicine

W. W. Jarrell, M.D.....	Thomasville
Ralston Lattimore, M.D.....	Savannah
Thos. D. Coleman, M.D.....	Augusta

Tuberculosis

C. H. Richardson, M.D.....	Montezuma
J. H. Hammond, M.D.....	LaFayette
T. E. Oertel, M.D.....	Augusta

Pellagra

G. M. Niles, M.D.....	Atlanta
E. M. Green, M.D.....	Milledgeville
N. M. Moore, M.D.....	Augusta

Nervous and Mental Diseases

L. M. Gaines, M.D.....	Atlanta
E. T. Gibbes, M.D.....	Gainesville
W. R. Houston, M.D.....	Augusta

Pediatrics

W. Z. Holliday, M.D.....	Atlanta
M. A. Clark, M.D.....	Macon
W. A. Mulherin, M.D.....	Augusta

Public Health

E. C. Benedict, M.D.....	Athens
H. F. Harris, M.D.....	Atlanta
E. E. Murphey, M.D.....	Augusta

Surgery

W. F. Westmoreland, M.D.....	Atlanta
J. R. B. Branch, M.D.....	Macon
W. H. Doughty, Jr., M.D.....	Augusta

Orthopedics

H. J. Williams, M.D.....	Macon
Michael Hoke, M.D.....	Atlanta
H. M. Michel, M.D.....	Augusta

Genito-Urinary and Syphilis

J. L. Farmer, M.D.....	Savannah
W. L. Champion, M.D.....	Atlanta
H. W. Shaw, M.D.....	Augusta

Obstetrics

H. McHatton, M.D.....	Macon
R. L. Miller, M.D.....	Waynesboro
A. J. Kilpatrick, M.D.....	Augusta

Gynecology

E. G. Jones, M.D.....	Atlanta
R. P. Glenn, M.D.....	Columbus
W. W. Battey, Jr., M.D.....	Augusta

Eye, Ear, Nose and Throat

F. P. Calhoun, M.D.....	Atlanta
H. H. Martin, M.D.....	Savannah
W. C. Lyle, M.D.....	Augusta

Roentgenology

E. R. Corson, M.D.....	Savannah
J. S. Derr, M.D.....	Atlanta
C. W. Crane, M.D.....	Augusta

Anaesthesias

T. J. Collier, M.D.....	Atlanta
Chas. Usher, M.D.....	Savannah
M. S. Levy, M.D.....	Augusta

Laboratories

K. R. Collins, M.D.....	Atlanta
V. H. Bassett, M.D.....	Savannah
Everard Wilcox, M.D.....	Augusta

DISTRICT SOCIETIES

DISTRICT	PRESIDENT	SECRETARY
First	E. T. Coleman.....Graymont	Chas. Usher.....Savannah
Second	Hugo Robinson.....Albany	F. M. Martin.....Shellman
Third	C. A. Greer.....Oglethorpe	M. R. Smith.....Cordele
Fourth	H. J. Goodwin.....Roopville	Homer Boatright.....Carrollton
Fifth	W. D. Travis.....Covington	W. S. Ansley.....Decatur
Sixth	W. J. Little.....Macon	I. H. Adams.....Macon
Seventh	A. B. Greene.....Cartersville	T. Lowry.....Euharlee
Eighth	T. J. Willis.....Washington	D. H. DuPree.....Athens
Ninth	V. D. Lockhart.....Maysville	A. D. White.....Gainesville
Tenth	J. R. Beall.....Blythe	G. A. Traylor.....Augusta
Eleventh	H. C. Wheelchel.....Douglas	T. J. Carswell.....Waycross
Twelfth	(New District, not yet organized.)	

COUNTY SOCIETIES

COUNTY	PRESIDENT	SECRETARY
Baldwin	J. W. Mobley.....Milledgeville	W. F. Tanner.....Milledgeville
Banks	V. D. Lockhart.....Maysville	J. D. Rice.....Homer
Bartow	A. T. Calhoun.....Cartersville	H. E. Felton.....Cartersville
Ben Hill	E. J. Dorminy.....Fitzgerald	L. S. Osborne.....Fitzgerald
Bibb	F. M. Cunningham.....Macon	W. D. Hereford.....Macon
Blue Ridge	J. S. Tankersley.....Ellijay	C. B. Crawford.....Blue Ridge
Brooks	S. S. Galuden.....Quitman	J. S. King.....Quitman
Bullock	D. E. McEachern.....Statesboro	F. F. Floyd.....Statesboro
Burke	C. H. Cox.....Waynesboro	J. M. Byne.....Waynesboro
Butts	B. F. Aiken.....Jenkins	W. H. Steele.....Jackson
Carroll	M. M. Hallum.....Carrollton	R. E. Foster.....Carrollton
Chatham	V. H. Bassett.....Savannah	A. J. Waring.....Savannah
Clarke	A. C. Holliday.....Athens	M. F. Matthews.....Athens
Cobb	W. M. Kemp.....Marietta	W. H. Perkinson.....Marietta
Coffee	C. W. Roberts.....Douglas	Quitman Holton.....Douglas
Colquitt	J. H. Green.....Hartsfield	J. E. Lanier.....Moultrie
Coweta	T. B. Davis.....Newnan	T. S. Bailey.....Newnan
Crisp	A. J. Wheelchel.....Cordele	T. E. Bradley.....Cordele
Decatur	N. L. Spengler.....Donalsonville	Gordon Chason.....Bainbridge
DeKalb	A. R. Watkins.....Chamblee	W. S. Ansley.....Decatur
Dougherty	C. W. Walker.....Albany	Hugo Robinson.....Albany
Elbert	C. E. Earle.....Elberton	L. P. Eberhart.....Elberton
Emanuel	C. R. Riner.....Summit	R. C. Franklin.....Graymont
Floyd	W. W. Mangum.....Rome	W. L. Funkhouser.....Rome
Forsyth	F. G. Moss.....Royston	J. H. Hockenhull.....Cumming
Franklin	L. B. Clarke.....Atlanta	B. T. Smith.....Carnesville
Fulton	W. B. Floyd.....Plainville	R. R. Daly.....Atlanta
Gordon	C. O. Copelan.....White Plains	E. O. Shellhorse.....Calhoun
Greene	W. V. Chandler.....Baldwin	E. G. Adams.....Greensboro
Habersham	A. D. White.....Gainesville	R. B. Lamb.....Demorest
Hall	R. C. Wiley.....Sparta	E. T. Gibbs.....Gainesville
Hancock	L. Landers.....Commerce	J. A. Brown.....Sparta
Jackson	F. S. Belcher.....Monticello	J. C. Bennett.....Jefferson
Jasper	J. W. Pilcher.....Stellaville	C. L. Ridley.....Hillsboro
Jefferson	L. J. Belt.....Milen	G. L. Carpenter.....Wrens
Jenkins	J. J. Baston.....Dublin	W. E. Rushing.....Millen
Laurens	A. Griffin.....Valdosta	W. C. Thompson.....Dublin
Lowndes	C. H. Richardson.....Montezuma	J. M. Smith.....Valdosta
Macon	L. E. Roper.....Comer	C. A. Greer.....Oglethorpe
Madison	E. B. Terrell.....Greenville	J. L. Baker.....Carlton
Meriwether	J. F. Lancaster.....Forsyth	P. W. Fitts.....Greenville
Monroe	J. M. Crooke.....Columbus	J. O. Elrod.....Forsyth
Muscogee	Sterling Gibson.....Thomson	G. S. Murray.....Columbus
McDuffie	S. W. Everett.....Almon	B. F. Riley.....Thomson
Newton	J. T. Elder.....Farmington	O. L. Holmes.....Covington
Oconee	R. D. Herrman.....Eastman	W. M. White.....Watkinsville
Ocmulgee	J. A. Mallory.....Concord	J. C. Wall.....Eastman
Pike	C. V. Wood.....Cedartown	M. M. Head.....Zebulon
Polk	V. H. Taliaferro.....Eatonton	H. M. Hall.....Cedartown
Putnam	E. C. McCurdy.....Shellman	S. A. Clark.....Eatonton
Randolph	T. D. Coleman.....Augusta	F. G. Barfield.....Cuthbert
Richmond	E. R. Anthony.....Griffin	W. C. Kellogg.....Augusta
Spalding	Jeff Davis.....Toccoa	J. M. Thomas.....Griffin
Stephens	R. L. Grier.....Lumpkin	C. L. Ayers.....Toccoa
Stewart	J. A. Rhodes.....Crawfordville	M. Walton.....Lumpkin
Taliaferro	J. T. Arnold.....Parrot	L. R. Brown.....Sharon
Terrell	W. W. Jarrell.....Thomasville	C. T. Kenyon.....Dawson
Thomas	W. H. Hendricks.....Tifton	Harry Ainsworth.....Thomasville
Tift	J. M. Meadows.....Vidalia	L. A. Baker.....Tifton
Toombs	H. L. Carroll.....Babcock	T. C. Thompson.....Vidalia
Tri	F. M. Ridley, Jr.....LaGrange	C. K. Sharp.....Arlington
Troup	J. M. Underwood.....Lafayette	John Banks.....LaGrange
Walker	J. C. Rippard.....Waycross	J. H. Hammond.....Lafayette
Ware	G. R. Maner.....Warrenton	T. J. Carswell.....Waycross
Warren	J. G. Tuten.....Jesup	R. D. Nash.....Norwood
Wayne	A. W. Simpson.....Washington	E. C. Crummeay.....Jesup
Wilkes	W. C. Tipton.....Sylvester	O. S. Wood.....Washington
Worth		J. L. Tracy.....Sylvester

Journal of the Medical Association of Georgia

W. C. LYLE, M.D., Editor - Augusta, Georgia

THE IMPORTANCE OF A CORRECT DIAGNOSIS OF SKIN LESIONS AND EXHIBITION OF A CASE OF DERMATITIS HER- PETIFORMIS *

Cosby Swanson, M.D., Atlanta

In presenting tonight, this subject for your consideration, I do not lay any claim for originality, I simply wish to review a subject that is of interest to all physicians, especially so to those who are interested in Dermatology and Venereal Diseases.

The importance of a correct diagnosis in skin diseases is, as in any other branch of medicine, the first consideration both as to treatment as well as to prognosis; but I must say that in Dermatology the question of a correct diagnosis is of more vital importance from the standpoint of treatment, be it simply palliative or energetic measures. And by diagnosis I do not mean a simple clinical diagnosis, but one embracing microscopical and serological tests, thereby excluding the possibility of an error by relying on the clinical appearance of the lesions, and the patient's own delusive account of his disease.

Of recent years physicians realize more fully than ever before the necessity of a correct diagnosis in skin diseases, most particularly in syphilitic lesions, now that the accepted treatment is so drastic and the results so brilliant; then, too, the field of Dermatology has broadened out in its true value; parasitic diseases are recognized more readily; the microscope has shown us certain pathological conditions in skin lesions that further add to the necessity of a correct diagnosis before beginning any kind of treatment.

In dermatology, although subjective symptoms are of some value, very little reliance can be placed upon them, inasmuch as the patient will invariably belittle or exaggerate conditions, whether intentionally or otherwise. This is well shown by the fact that in all the clinics in this

country and in Europe no clinical history is obtained before making a diagnosis, and this procedure has proven the best, if not the only one. We have to rely on objective symptoms for a clinical diagnosis, the character of the lesions as occurring, their distribution, accompanying conditions and the general condition of the patient as shown by a careful physical examination. Therefore, objective symptoms are what we must rely upon, and they speak for themselves; they are what we find by careful examination and are the foundation upon which our knowledge of the diagnosis of dermatological conditions must be built.

Every skin disease has its clinical characteristics which serve to distinguish it from others; such as the type of the individual lesion, papule, vesicle, pustule, etc., the general distribution of the eruption, peculiar grouping and color of the lesions; by these characteristics we can differentiate certain skin diseases, then by resorting to the microscope and serological tests we can make the diagnosis with a degree of certainty. This was very forceably impressed upon me at the New York Skin and Cancer Hospital, where I began my study of Dermatology. The clinicians would always make the diagnosis by "dermatological sight reading," in other words the case is carefully studied from an objective point of view and a tentative diagnosis made before going into the question of the clinical history of the case; later, a detailed history is taken and the necessary laboratory tests are made to confirm, or refute the original diagnosis. This method of procedure, as already stated, prevails in all skin clinics in this country and in Europe, and by this method of attaining diagnosis one's power of observation becomes very acute, and this is the first essential to the success of a Dermatologist.

At this point I will say a few words as to the harmful results that follow instituting any form of treatment for skin diseases when in doubt as to the diagnosis, thereby masking, as it were, the characteristic points of the particular disease, so that the lesions are not seen in their true type.

* Read before the Fulton County Medical Society June 13, 1912.

A few examples that follow well illustrate this: Pityriasis Rosea, Dermatitis Exfoliativa, Pellagra, the drug rashes, the various forms of Dermatitis Venenata, and the Eczemata; in the last three named, local

make. It is needless to dwell on the results that would follow, as all know there are times very unpleasant, not only from the patient's standpoint, but particularly from the doctor's.



FIG. 1. Case of Dermatitis Herpetiformis, showing the characteristic erythematous usticaria-like eruption.

treatment before a diagnosis is made would in most cases completely alter the clinical appearance of the lesions, and a positive diagnosis would be extremely hard to

By the use of certain drugs that are first in the thought of the practitioner for the treatment of skin diseases, such as sulphur, tar, resorcin, mercury, and a few

others, used locally, of course, at times the resulting dermatitis completely changes the character of the lesions.

As yet, in this paper, I have said very little regarding the importance of a cor-

skin diseases. I refer to Eczema and Syphilis. Among the many pathological changes to which the skin is subject there is no other disease that is of greater interest to the physician than eczema. Much specula-



FIG. 2. Same case ten days later, showing the papular stage of the disease, with a few scattered pustules.

rect diagnosis in two skin diseases, the two that constitute a very large per cent of all the skin diseases that come to the attention of those now making a specialty of

tion has risen as to its true nature and no hard and fast line can be drawn as to its true cause. Dr. Sequeira, of London, and others hold that it is a non-microbic in-

flammation of the skin occurring in certain susceptible subjects, either from external irritation or internal disturbances of a toxic, or from a reflex nervous origin. Predisposition is a cardinal feature and

tation of the skin followed by simple infection.

There are certain predisposed people that are susceptible to local irritating applications, and the inflammatory process



FIG. 3. Same case one month later, in quiescent stage, showing a few papules and small amount of scarring and pigmentation.

the exact cause being unknown it is at times hard to differentiate it from the eczema-like conditions that we see in Dermatitis Venenata, the results of local irri-

once started is not limited to the original area of irritation; it spreads widely beyond and may appear in distant parts of the body, very frequently resembling an

eczema in its general aspects. As to treatment, it is of the first importance that the diagnosis should exclude the possibility of the condition being a simple dermatitis from some irritation, be it of a chemie or parasitic origin.

A typical illustration of the errors that one can easily make in instituting treatment for a skin condition before being assured of the diagnosis, is that of a case of Scabies. It is true that an ordinary case of Scabies is very easy to diagnose, but a case of several months' duration with an eczema-like condition (as is quite often seen in our large cities among the poor), every clinical symptom of an eczema is present, but to treat this case as you would acute eczema would simply be wasting one's time.

Syphilis is a disease of such protean aspects that in some of its many clinical phases it presents points of resemblance more or less striking to almost all other dermatological lesions, so much so that it is considered an imitator of all skin diseases; therefore the establishment of a diagnosis in syphilis is one that takes some skill, that is, from purely clinical symptoms, and the establishment of a positive diagnosis in syphilis, as in no other disease of such importance, involves not only the question of treatment, a prompt and energetic treatment, but other matters of vital interest to the patient in his future life. If a patient has syphilis, even with the use of the new drug Salvarsan, it still requires a long and heroic treatment; his social relations must largely be guarded till all active symptoms of the disease are under control, so that he is not a possible source of infection to others that come in contact with him. Later in life should he exhibit any of the parasymphilitic affections, or new growth, the certainty of his ever having had syphilis would be of the utmost importance in deciding as to the character of the presenting lesions, and the course of treatment to follow. It is then easily seen how vastly important it is to make an early and positive diagnosis in syphilitic infections, and with the aid of the microscope and the serological tests that are now well perfected, an error of diagnosis is more or less inexcusable; we are able to cope with this disease and not prod along in the dark, subjecting the patient to the horrors of a doubtful diagnosis, producing in some

what is rightly termed syphilomania. No doubt some of you will argue that it is better to wait till positive secondary symptoms present themselves before instituting treatment, but from my experience, and that of those with whom I was associated while making a special study of syphilis, I feel justified in stating that it is of the greatest importance to institute appropriate treatment without any delay. Statistics as to the recurrence and the severity of later lesions will show that treatment begun after marked secondary lesions are present are of a greater frequency than when treatment is begun when the initial lesion is present. All this will, I trust, show that it is of the first importance in syphilis to make an early diagnosis, with the recognition of the spirochetæ as the causative organism, and the reliability of the serological test, it is with positiveness that we state that patient has syphilis.

In conclusion I wish to present a case of Dermatitis Herpetiformis, which was referred to me by Dr. Walpole Brewer, of Atlanta.

My reasons for showing this patient are three-fold:

First—Rarity of the disease;

Second—A typical type of the disease;

Third—It well illustrates the importance of correctly diagnosing our skin patients.

Dermatitis Herpetiformis is not of the more common dermatoses and is, therefore, to the average practitioner a very rare disease. At the New York Skin and Cancer Hospital it occurs about one-third of one per cent. of all the patients seen in the out-door clinics.

While Bazin, as already shown, to some extent foreshadowed it, it was chiefly through Tilbury Fox, followed by Dühring, that we began to get a clear idea of this protean disease.

Both sexes are equally affected; it may occur at any age, but is more common in adults.

The direct cause of Dermatitis Herpetiformis is unknown; no specific organism has been found in the lesions. It is held by most dermatologists to be a toxemia, while others lay more stress on a nervous origin. From the remarkable excess of eosinophile cells found in the blood, Lereddie and Perrin brought forward the hypothesis that the primary cause of the dis-

case is an affection of the bone marrow. Of this, again, there is no proof.

The diagnosis in a typical case is made readily, but in some typical types of the disease it becomes very difficult at times to distinguish it from other dermatoses, more especially if not seen at the various periods of development. The main distinguishing features are, multiformity of lesions, tendency toward grouping, accompanied with intense itching and burning sensation, followed by more or less pigmentation and scarring, and pursuing a persistent chronic course with remissions. At times it could be mistaken for Pemphigus; when the erythematous lesions predominate it has a striking resemblance to Erythema Multiforme, and Urticaria; after the acute stages have subsided, Papular Eczema and Prurigo would have to be excluded; and very often it is mistaken for Syphilis by those not familiar with the disease.

Prognosis.—The disease, under appropriate treatment, in most cases gets well in a few weeks to several months, but there is in all a great tendency to recurrence. There are patients, however, who are rarely free from some degree of the eruption for years.

A brief history of the patient presented is as follows: Male, age 26, occupation, elevator operator. Family history, negative. When a child he suffered with rickets, which has left him with a curvature of the spine. Since childhood and up to the present illness his health has been good. The onset of the present disease began about two years ago, and the present attack February 20, 1912, with typical pinhead to pea-size slightly raised irregular-shaped vesicles occurring in groups on the elbows, shoulders, and buttocks, followed in a few days by urticaria-like edematous infiltrations and a few scattered bullae; in a day or two the vesicles and bullae ruptured, the edematous lesions disappeared, leaving a few pustules and a papular eruption all over the body, all of which is very characteristic of the disease. The cervical, axillary, epitrochlear and inguinal glands were enlarged. There was also an acute catarrhal inflammation of the throat and conjunctiva, as well as Choroiditis, Keratitis and Iritis. Just here I would like to call your attention to the last three eye conditions named, as this is the first case that I can find any

record of in which these conditions complicate this disease.

THE TREATMENT OF PULMONARY TUBERCULOSIS BY COMPRESSION OF THE LUNG*

S. T. Harris, Highlands, N. C.

The treatment of pulmonary tuberculosis by introducing gas between the costal and visceral layers of the pleura is being variously called **Compression of the Lung, Artificial or Induced Therapeutic Pneumothorax, and Collapse Therapy.**

According to the general practice followed out in this procedure up to the present time, it is likely that **compression of the lung** is the term most specifically descriptive of the condition desired—that is not only of a pneumothorax, but of one with more or less pressure.

A Curative Method of Nature

Compression of the lung in the treatment of pulmonary tuberculosis is merely following a method and suggestion of nature. If we but review the past two or three centuries of autopsy findings and clinical observations, we find that this condition has occurred as a secondary result of disease and that compression has been produced by effusions. That these conditions, occurring singly or combined, have cured tuberculous lesions in the lung is a matter of fact.

Partial collapse of the lung obtained by plastic operations on the thoracic wall—as the operation of complete pleuro-pneumolysis of Freidrich—has shown remarkably favorable results and curative influence.

It is also true that compression caused **artificially**, results in cure. This has been proven by autopsy findings on those who have died of other diseases after having been subjected to this treatment, and further proved by those who have been cured and in whom no clinical evidence of the disease can be found.

How Compression Cures

It might be asked, how does compression cure? I will answer that it does so—

First. In the same manner that a broken bone or solution in continuity of

* Read at meeting of Medical Association of Georgia, Augusta, Ga., April, 1912.

any other tissue is cured—by being given perfect physiological rest and coaptation of raw or ulcerated surfaces.

In truth it seems that any method that produces rest of the lung gives good results. I might suggest that the far-famed fresh air treatment owes its universally admitted curative properties to the fact that fresh air contains a maximum percentage of oxygen, and on this account requires less frequent and less strained respiration, thereby giving the lung tissue more rest.

Second. In the same manner that an abscess is cured—by evacuating its foul contents and the prevention of its further formation by the application of a remittent pressure. More or less of the direct destruction of tissues and a good part of the symptoms peculiar to phthisis are supposed to result from secondary infection by pyogenic organisms. Now, as the treatment and cure of localized pyogenic infections consists in evacuation and drainage, does it not logically appear that the treatment of the secondary infection aspect of phthisis should be evacuation and drainage?

This pump-like pressure closes the avenues against further infection. It not only evacuates the debris of disease through the natural channels, but forces the toxins which have been absorbed by the tissues surrounding the diseased areas rapidly into the circulation. Under ordinary conditions these toxins form a zone of protection for the infection against the natural defenses of the body, and thereby permit the more or less unhindered progress of the disease. This neutral, or non-resistant zone under the influence of remittant pressure, is broken up and prevented from reforming, thus checking the advance of the destructive process and allowing nature to deal directly with the invaders. That this neutral and non-resistant zone exists in peri-tuberculous areas has been demonstrated by Van Calcar.

Third. Hyperaemia..

It has been shown that an intense state of hyperaemia is produced by compression of the lung. The well-known curative action of this condition needs no comment.

Fourth. By stopping the lymphatic circulation. It was demonstrated by Shingu in animal experimentation that when soot was inhaled and compression of one lung

produced that after a period the soot was more present in the compressed lung, thus definitely demonstrating lymph stasis as a result of compression. As the lymph stream is supposed to largely disseminate the tubercle bacilli, we thus see that its stoppage necessarily inhibits the extension of infection.

Fifth. By producing fibrosis and the formation of cicatricial tissue, which we all know is the cured stage of a t. b. infection. That this results from complete functional rest and compression has been shown in animal experimentation by both Reubel and Dunin. The same condition has been shown by autopsies on the human subject whether the compression was produced by disease or by surgical interference.

It might be suggested that as compression cuts off the oxygen from the blood, thereby rendering all the blood in the compressed lung venous or deoxygenated in its character, and as the tubercle bacillus is an aerobic organism, it would follow that its growth would be hindered or prevented.

Dangers and Complications and Their Treatment

The production of compression of the lung by gas is a very delicate operation, and with certain errors in technic and persistence in the face of contra-indications for its application, is quite dangerous. This in spite of assertions to the contrary. It is delicate for the reason that the field of work is concealed from view, except with the Brauer technic, which will be described later, and this has its compensating disadvantages. And because we have to produce a cavity between thin, delicate membranes held tightly together by a condition of vacuum and capillary attraction. And because this field is adjacent to tissues which should not be injured.

If an aneurism or neoplasm, the normal lung or blood vessels, or a superficial spot of infection on the surface of the lung is injured, there might result complications in the progress of the operation, as well as in the condition of the patient.

If gas is injected while the point of the needle rests within a blood vessel, or an overgrowth of the same, there would result gas embolism which very likely would prove fatal. It has been stated that 10 c. c. of gas might be thus injected without necessarily proving fatal. This assertion

is to be doubted. A blood vessel external to the lung or pleura might be injected with gas with similar results. It is very likely that gas embolism has been the cause of practically all of the deaths due to this method. Where gas embolism is not followed by death, we may have various forms of temporary paralyses, unconsciousness, convulsions, etc. These effects usually pass off within a few hours without evidence of permanent injury. It is possible that gas embolism might be produced by gas being injected into a torn patulous vein when the point of the needle is not within its lumen, as for instance, where an adhesion has broken loose from too much pressure.

The treatment of gas embolism consists in the use of analeptics, especially inhalation of strong ammonia and oxygen, use of alcoholics and artificial respiration. Injury to a blood vessel could, of course, cause more or less hemorrhage.

Much has been said in regard to pleural reflex. I must confess to a decided skepticism in regard to the actual importance of this condition, and think very likely it has been thought to be present, when in truth the condition was gas embolism. I have never seen it occur in the hundreds of times I have gone through the pleura with a needle. One case of pleural reflex has been reported which occurred even before the skin was touched with the needle. Why should this be attributed to pleural reflex? Why not say some other reflex? That there was a weak heart, or the symptoms occurred from fright? The last suggestion very likely is the truth about pleural reflex—that it is due in the majority of cases to fear and nervousness, precipitated by the more or less pain when the pleura is pierced. All evidence goes to show that it is a nervous explosion—a phenomenon not necessarily a sequence of insult to the pleura—something similar to surgical shock. Nevertheless, alarming symptoms have been reported as due to it, and the condition should not be disregarded. A hypodermic of morphia before the operation is considered a preventive.

Death from abscess of the lung following infection by puncture has been reported in one case. Infection might be produced by being carried in by the needle or the gas, or upon withdrawal of the needle when a septic area in the lung had been pierced. In this manner, infec-

tion of the pleura may occur. A fistulous tract has been thus produced.

Too much pressure, when suddenly applied, undoubtedly can be a source of danger. From it there could occur too much and too rapid displacement of the heart, greater blood vessels, and organs of the mediastinum, as well as pressure on nerves and encroachment on the area allotted to the opposite lung. Decompression would be the treatment for this condition.

The pleura itself could possibly be ruptured with its resultant disaster.

By far the most common complication is **emphysema**. The condition is always painful and might prove serious. However, it usually passes off in a few days with no ill effects left behind. I recently had a case where a deep emphysema occurred in the anterior part of the neck on the opposite side from the one operated on. An emphysema too slight or deep to be felt can be easily heard by pressing the bell of the stethoscope firmly on the suspected area. If present an unmistakable crackling sound is heard. The treatment of emphysema is rest, cold applications, and if too much pain, some form of opium.

It is very likely that improper technic is responsible for all the above named conditions, with the possible exception of pleural reflex.

In addition to the above named complications, there have frequently occurred pleural exudates, nearly always sterile. Why they should occur so frequently is a matter of debate. It has been suggested that perhaps exudates occur no more frequently following compression than they ordinarily do in cases of phthisis, but on account of the close watch and frequent examinations, are always detected. All cases that were localized exudates before operation and those which would have been localized but for it, show in the bottom of the thorax in the ordinary manner. This fact might account for an apparent increase in proportion. I have seen these exudates occur following an attack in the side of the compressed lung with the ordinary signs of pleurisy with the exception of not nearly so much pain, and of course no friction sounds. It might prove a matter of some difficulty to diagnose a case of pleurisy in a pneumothorax side. Beyond question these exudates frequently occur without any subjective and possibly no clinical symptoms. The diagnosis of

pleurisy resulting in effusions can be confirmed and proven by inserting a needle in the pleural cavity as for an injection of gas, and connecting with a manometer. Where an effusion has occurred there will not be the usual fall in pressure from the reading of the last filling. The pressure may be as much or even greater, as in the case of Mr. McC. The progression of the effusion and its absorption may in this manner be kept up with. An effusion does not necessarily interfere with a continuation of the treatment. In the case above referred to, I kept up the fillings during the whole progress of the complication, and am inclined to think that the gas pressure had quite an influence in retarding and stopping the effusion. It might be possible that the effusion would progress so rapidly that an undesirable degree of pressure would be produced. In this case a de-compression to the desired point, either of the gas or fluid, could be performed. It has been shown that it is quite easy to relieve a thorax to the last drop of either a hydro- or pyothorax by simply inserting a trocar low down and inserting a needle connected with gas above and blow it out as you would the contents of an egg through two holes. But this would ordinarily not be the best practice, as an effusion in a great many instances takes the place of fillings, with gas, reduces their frequency and with proper control answers practically the same purpose. At the same time the effusions should not be allowed to entirely replace the gas.

Too great a pressure, prolonged for a certain length of time, might lead to more or less permanent distortion of some of the mediastinal organs. The scarring of extensive lesions in the lung could lead to a permanent shrinkage in its size with proportionate collapse of the thoracic wall. An occasional filling would prevent this collapse, but of course at the same time render more or less useless the sound parts of the lung while this was kept up.

If a lung showed a tendency to permanent collapse, de-compression methods could be used to restore it to its function.

It has been thought that compression occasionally produces digestive disturbances. The fact that this is a well-recognized and extremely frequent complication of phthisis might indicate that the disease and not the compression is at fault. Even

if the compression did cause such trouble, it should not be abandoned, but merely regulated to suit the peculiarities of the case.

De-Compression

It has been indicated that de-compression is the proper method for treating some of the complications of an induced pneumothorax. We have done this procedure on several occasions. Twice this was done where acute trouble had set up in the other lung, and on both occasions immediate relief was afforded. It was especially marked in the case of Mr. Z., whose life had been despaired of.

Indications and Contra-Indications

As this treatment is curative, it is indicated in any case not complicated with some other fatal disease, and where the process in the other lung has not involved too great an area, or is not too active. Where the other lung is involved, it should be carried out with the greatest caution. It depends entirely as to whether the better lung is able to stand the extra strain thrown upon it. It has been demonstrated that in treating bi-lateral cases by this method, that an operation on the more diseased side has exerted a favorable influence on the less diseased lung. This might be explained by the fact that the most diseased lung is doing the most harm and is responsible for a larger part of the symptoms, and when we cut off by compression and its effects this greater part of the trouble, the system has a chance to successfully deal with the lesser evil. Also it might be assumed that the trouble in the less infected lung is kept up by aspiration of t. b. thrown off by the other side. The hyperaemia produced by the excessive amount of blood which the lung opposite to the one operated on must necessarily aerate under the changed conditions very likely has a curative influence. Bi-lateral cases have been cured by operating on one side at a time.

Unquestionably the ideal case is mono-lateral without pleural adhesions. Pleural adhesions add difficulty and at times render impossible the application of the method. In fact they present the greatest obstacle in producing a compression. A thickened pleura shown by radiography might indicate adhesions, but by no means always so. A limited movement of the lung is indicated by physical examination

might mean adhesions, but it is safe to say that the only way to find out whether or not you are able to produce a compression is to try.

As such favorable results have uniformly been obtained, and as practically all of the cases which have been operated on have belonged to the hopeless class, it requires no stretch of the imagination to believe that more favorable cases would receive at least the same amount of benefit. In view of the uncertain results of other methods of treatment and the uniformly definite results from compression, I unhesitatingly advocate its application even in incipient cases. For who can prophecy the final results of such cases?

In tuberculosis of the lung, as in other diseases, the remedy indicated in any stage is the one which gives the best results.

Technic

At this point I wish to emphasize the great distinction in its immediate effects upon the patient between an artificially produced pneumothorax and one resulting from disease. It is not fair to the induced condition to compare it to the other for the simple reason that here we have its application under perfect control and its effects are watched with the minutest care.

It is the exception for the patient to feel the slightest pain or inconvenience beyond that which would be experienced from an hypodermic injection.

The proportion of danger to life is small provided the application is properly made, and this proportion can be further reduced. As it stands—about 1%—it is not to be considered when compared to the risk which the patient bears without its application. The mortality tables bear witness to the assertion that the unfortunate with this disease can afford to take almost any risk for a chance of cure. In determining a site for operation, take a radiograph and select from it a spot distant from diseased areas, thickened pleura, the heart, great blood vessels and diaphragm. It is better for this spot to have a thin thoracic wall. Auscultation and percussion should coincide with the radiographic findings. This selection is most important to the success of the operation.

Initial Operation

Four more or less distinct methods have been used in the initial operation, namely, that of Forlanini, of Murphey, of Brauer,

and of Salomon. I will describe the essential differences.

Forlanini uses a fine needle. While this produces the minimum amount of pain or injury external to the pleura, it has the disadvantages—first, of more readily being obstructed by tissue or blood; second, on account of its fineness the operator is less able to detect its passage through the parietal pleura by feeling, sound and information from the patient; third, consequently the lung is more likely to be pierced; and fourth, on account of the small lumen of the needle sufficient air or gas is not admitted through it quickly enough to force apart the layers of the pleura, which are held firmly together by vacuum and capillary attraction.

The bore of the needle used should be large enough to carry a sufficient head of air or gas transmitted by atmospheric pressure to immediately force inward the visceral layer of the pleura on the passage of the needle through the parietal layer, or the withdrawal of the probe after its passage. This needle should also be sufficiently large to enable the operator to hear the passage of air or gas, which could not be done with the fine needle.

Murphey uses quite a large needle with a more or less blunted and beveled point. He first makes an incision through the skin down into the subcutaneous tissue, sufficiently large to admit the needle. With this needle the operator is enabled to feel and often hear the passage through the pleura. Also the patient is likely to be sensibly conscious of it. He also attempted to entirely collapse the lung at one sitting, which is unnecessary and more or less dangerous. His needle as a rule is unnecessarily large and causes too much traumatism.

The method of Salomon, of Vienna, consists in the use of a large, short needle terminating in a button head. It carries a blunt pointed, hollow probe with an opening to the side of its point through which the gas is injected. The needle is thrust directly in its full length and is supposed not to reach quite to the pleura. The probe is then inserted and finishes the puncture. It is obvious that the blunt point of a probe is not nearly so likely to cause injury to the lung, but with a thickened pleura it would be difficult to complete a puncture with it. These needles are used in different lengths and sizes for the individual case. The method is theo-

retically good, but is open to some of the same objections as that of Murphy.

The Brauer method consists of making an incision something like 6 c. m. in length down to the parietal pleura, which is exposed to the extent of about the size of a finger nail. It can be done under the influence of morphine, Seleich infiltration, and sponging the pleura when exposed with 5% cocaine. The wound is held open by retractors. The pleura is punctured with a blunt Salomon probe. The advantages claimed for this method are that you can see the pleura, and when there are no adhesions, the lung can be seen to move beneath it; and the production of emphysemas is avoided. The disadvantages are the incision, use of cocaine, the danger of infection, and if the pleura is not free another incision is necessitated. A fistulous tract and empyemas have been produced by this method. If the pleura is free the needle method would have been successful with proper technic.

We ordinarily use the following modification of the Murphey method. A decidedly smaller needle, with the probe inserted to where it begins to slope off toward the point. It is likely better for this point to be dull. You may first make a cut through the skin with a same size, sharp-pointed needle, then follow with a dull-pointed one. As soon as you feel, and possibly hear, the passage of the needle through the pleura, and there is loss of resistance, gently push in the probe. The loss of resistance will be easily perceived and further the point of the needle will be cleared of debris. Remove the probe, place the ear close to the head of the needle, instruct the patient to breathe deeply or cough. If you are between the layers of the pleura, the in-rushing air, causing a whistling or clicking sound, will be distinctly heard. Now connect the needle with the manometer. This instrument is a part of the apparatus devised by Forlanini, and modified by Saugman and Von Mural, which we use. It has been filled with nitrogen previous to beginning the operation. Now, if the needle is free and its point is between the costal and visceral pleura, and if these membranes are not too closely held together by adhesions, we have movements usually of a number of centimeters synchronous with inspiration and expiration, more or less according to the freedom of the pleura. The pressure,

as indicated by the manometer under the right condition, is always negative and will remain so in the further progress of the work until the lung is collapsed. At the time of collapse, the pressure is neutral, and a positive pressure is only shown after collapse is succeeded by compression, or when the lung is held out by adhesions. You may have a positive pressure showing and suddenly during the same injection adhesions give way, with a falling of pressure even to negative readings. Adhesions may give way between injections and show a decided difference at the next filling. No gas should ever be turned on until unmistakable evidence is indicated by manometric readings that you are between the parietal and visceral layers of the pleura. Too much stress cannot be placed upon this assertion. If you do not proceed with an injection without this knowledge, you will avoid practically all of the dangers and complications which have occurred in this work.

With the point of the needle within a bronchus or a cavity, you would have quite marked respiratory readings, but with this difference: On inspiration a negative reading would show to the time of the actual ending of the movement; but on a further continuation of effort, the column of liquid drops back to the neutral pressure line. On expiration, positive pressure shows until its actual end; and on further continuing the effort, the column rises back to the normal line. 'With this indication the needle should be withdrawn, although I have seen many injections with no harmful results, but do not deem it safe and it is useless.

If the needle is in a blood vessel there would be a rise in the pressure. Injection here is most dangerous. Needle should be withdrawn at once.

A needle which is partially stopped up will give uncertain and irregular readings of the manometer. This is proof of the obstruction. The needle should be cleared with the probe, and if this fails, withdraw.

If the needle is within a mass of adhesions, there might be movement of the manometer, but on injecting the smallest amount of gas there is a sharp rise in pressure. As to whether the injection is to be continued, would be a problem for the operator.

Paradoxical movements of the manometer have been observed. On inspiration

there was a rise, and on expiration a fall in pressure. These readings, outside of their reversed nature, conform in extent and action to the normal ones, and are no contra-indication for continuing if you are sure you are within a pleural cavity. This condition surely would not occur at the time of the initial operation, or at least until considerable gas had been used. It had been claimed that when a paradox occurs, that you are within or connected with the abdominal cavity or stomach.

In concluding operation, after a sufficient amount of gas has been introduced, cut off the gas, withdraw the needle quickly, seal with collodion, and apply a dressing if deemed necessary.

The secondary injections are made each day for a time. A hypodermoclysis needle is used, the skin merely painted with tincture of iodine, and observing the same technic as described in the initial operation. As the lung collapses and compression is obtained, the interval between fillings is increased. When the pressure remains positive from one filling to another, you may go days, a week or even more without repeating. In some cases the pressure will hold for a long time. A small amount of gas brought the pressure to the desired point in one of my cases after an interval of three months.

The Amount of Gas Used

The amount of gas used in the initial operation in our practice varies from 200 to 450 c. c. The amount used in after fillings would vary according to circumstances, and after compression has been produced would be of sufficient quantity to maintain the desired degree of pressure as indicated by the manometer. In our opinion this should not be excessive, varying perhaps from about 3 to 6 centimetres of water. We endeavor, both by frequency of filling and amount of gas, to keep this degree on a level, so at the beginning and end of each filling the two pressures would conform to the previous introduction. Of course circumstances might cause you to vary this practice.

Effects

At first with the normal pleura, the effect of this procedure on the patient is very slight, as we usually stop as soon as any subjective symptoms are noticed. The patient may feel some pressure and begin

to have indications of dyspnoea. As the treatment progresses there is consciousness of limitation of respiration on the operated side—a feeling as if a pillow were inside. The dyspnoea is always present but never to an alarming degree.

A certain degree of pressure on the diaphragm may somewhat limit the capacity of the abdominal cavity, although radiographs fail to show noticeable downward displacement of the diaphragm, and do show almost constant displacement of the heart, more or less bulging of the mediastinum, and at times considerable encroachment on the normal area of the opposite lung.

When pleural adhesions are present, pleuritic pains frequently wandering to different parts of the thorax are felt. These pains are very likely due to the tugging at or breaking up of adhesions, and when wandering the supposition is that adhesions in different localities are affected. The mid-sternal portion on the affected side is a frequent site for feeling of inconvenience, and this occurs in cases where apparently there are no adhesions. These symptoms disappear in a few hours.

There is usually more profuse expectoration, immediate drop in temperature, usually lowering of the pulse rate, and frequent decrease in respiration.

An illustration of the early effects of the treatment is shown in the recent case of Mr. M. The case is of some four and one-half years' standing, and has had the very best of treatment. Has spent three months at three different times at Asheville under the care of a doctor, who gave him tuberculin treatment for two months, together with the ordinary sanatorial methods. Is considerably emaciated. For months has been having fever, at times high, occasional night sweats, weight 91 pounds. On physical examination, no active signs found in left lung, but suspicion as to its soundness. Right lung found to be very much involved with signs of cavity formation. Bronchial gland involvement indicated at the hilum. Vertical heart (Hickey's sign) with the greater bulk drawn to the right diagnosed. Radiograph shows considerable quiescent and very likely healed areas in the left lung. The right lung showed extensive involvement with large and multiple cavities, with bronchial gland involvement, and a vertical heart with its greater bulk to the right of the median line.

At the initial operation on right side,

375 c. c. of gas was given without inconvenience to the patient. Several hours afterward he began to have fugitive pleuritic pains which lasted for some hours, making him quite uncomfortable. The amount of sputum decidedly increased, and changed to a more yellowish green color. The next day the apex beat of the heart was palpable to the left of the sternum. In twenty-four hours temperature dropped to normal for first time in months. Pulse rate reduced from 94 to 72; respiration from 24 to 18. Temperature from 101.5 degrees to normal. The patient feeling practically no embarrassment of respiration, and a general condition of well being. Radiograph on the fifth day, after 1,375 c. c. gas in all had been given shows the right lung fairly well collapsed, with the walls of two or three of the larger cavities still showing, and with the heart practically in its normal position on the left side.

It is worthy of note that here a strongly dislocated heart was very quickly and easily restored to its normal position. The accompanying radiographs illustrate this condition.

In the further progress of cases treated by this method, the cough ceases; the raising of sputum stops; tubercle bacilli are absent; temperature becomes normal and stays so; there is a progressive gain in strength and weight; all clinical and subjective evidence of the disease disappears. This is the average progress of an uncomplicated case.

We have been using this method at Highlands Camp Sanatorium for about two years.

Results

We have had thirty-four cases on whom this operation has been performed, and we re-operated on two of them after the gas had been absorbed—one of them five months after the last filling. Nine of these cases were monolateral in whom a complete pneumothorax or compression was produced. The process was arrested in each instance, giving 100%. There were adhesions in two of them. There was an effusion in one during course of treatment, and in another five months after discontinuing the treatment, following an attack of grippe and pleurisy. The gas had entirely disappeared and the effusion could hardly have had any connection with the treatment.

There were five monolateral cases where there was an incomplete pneumothorax. All of them had heavy adhesions, which prevented its formation, but even with this the results were good in three of them, negative in one, and one died of heart failure.

Ten of these cases, where complete pneumothorax or compression was produced, were bilateral. In nine of these the process was arrested in the lung operated on. One is too recent to classify, but the indications are good. In four the process has remained arrested in both lungs, and in four the process on the unoperated side remained more or less the same, with periods of either bronchitis, peri-tubercular pneumonia or pleurisy. It would be hard to say if any influence was exerted on these unoperated sides. There were three effusions—1 small serous, and 1 massive. In the third case there was an empyema, and a rapid process set up in the other lung, resulting in death. This patient had made remarkable gain and had been home against our advice for some months doing light housekeeping, with every evidence of the process being arrested.

There was incomplete or no pneumothorax on ten of the bi-lateral cases. There were adhesions in all of them. In two of them no pleural cavity whatever was produced and consequently no collapsing of the lung. Five of them were remarkably benefitted even with the small collapsing that was produced. Two died of intestinal tuberculosis, which the attempts at compression seemed to aggravate.

Your attention is invited to the fact that in all cases where a compression was produced that uniformly good results were obtained in the lung operated on. In these cases the combined mono and bi-lateral percentage, where the process was arrested, is 68.42%.

The more money The Journal of the Medical Association of Georgia makes out of its advertisements the less it costs the State Association to run the paper. This means that every member of the State Association has an interest in the advertising columns. If one business firm advertises and another does not, patronize the one that does. It is money in your pocket.

THE DIAGNOSIS AND HOME TREATMENT OF TUBERCULOSIS*

W. B. Hardman, M.D., Commerce

Notwithstanding the great interest recently excited in syphilis, hookworm, pelagra and cancer, "the Great White Plague" is the disease above all others that should continue to demand our most careful thought and most earnest consideration. A disease that is causing ten per cent. of all deaths should never cease to be the central object of our scientific endeavor.

For years the majority of the medical profession seemed to think that about all medical science could do for tuberculosis was to make the diagnosis about the time any layman could make the diagnosis, and prescribe for the unfortunate some cod liver oil—and a coffin. This idea, I am sorry to say, has not yet thoroughly been purged from the minds of many medical men. Tuberculosis is a curable disease. This should be firmly rooted and grounded in the mind of every doctor. Tuberculosis is largely a preventable disease should be just as strongly and indelibly impressed.

No disease known to medicine is more amenable to treatment when taken in time. Men who make many autopsies tell us that eighty to ninety per cent. of all people show the remains of some cured latent or uncured tubercular deposit.

But in order to cure tuberculosis most easily, and in many cases at all, the diagnosis must be made early. Dr. J. B. Murphy says: "With an early diagnosis we can get a 100 per cent. cure." Dr. Cabot, of Boston, publicly made the statement that not ten per cent. of the average doctors were capable of making an early diagnosis. A 100 per cent. chance and a 10 per cent. diagnosis is a pretty hard ratio, both on the patient and the doctor. These statements may be exaggerations to some extent, but I doubt if the exaggeration is very great. I do not claim to put myself among the ten per cent. of doctors who can make an early diagnosis of tuberculosis, but I do know I can make them much earlier than I did formerly, and I hope to do still better by a little more care and

study—and others can do the same. And herein lies the hope of the disease cure and the disease eradication. It should be most zealously and vigorously impressed upon all men in general practice, that the salvation of the tubercular depends not upon the laboratory man or the expert sanitarium man, but upon him. When the man in general practice gets this firmly fixed in his mind there is great hope of the future.

During the past five years the death rate from tuberculosis has decreased about 87 per cent. By early and careful diagnosis, and applying what we already know of therapeutics, it would be no dream to say that within the next ten years the death rate can be cut down to 33.3 per cent. This would be a saving in the United States alone of 50,000 people per annum.

But some may say it is an easy matter now to make a diagnosis, since we have the State Board of Health—the sputum examination will tell the story. And so it will if the sputum is positive. But in one respect especially these sputum examinations are misleading. Most of us conclude no tubercle in the specimen sent, no tuberculosis. We lose sight of the patient's general history and our physical findings, if we look for them, and conclude the matter is settled. This is a great mistake. We must not lose sight of the fact that there are seldom tubercle bacilli in the sputum, or seldom much expectoration until there is breaking down of the tissue. Tuberculosis is principally a spring and summer disease and it is when winter comes on and we get a cold and a mixed infection that the cough begins, and later the tubercle bacilli begins to show. Then we say we had a cold and it did not get well exactly—kept hanging on until it ran into tuberculosis. We should rely mainly on the sputum for confirmation of our diagnosis and not depend simply on that for making the diagnosis, for in a large majority of the cases the trouble can be strongly suspected or the diagnosis made before the germ appears in the sputum.

Think back on the cases you have treated. You will remember that practically all of these for some months or some years were a little under par. They were not quite up to their normal weight and strength. If you had taken, or had them take, daily temperatures for quite a while they would be found to have an

* Read at meeting of Medical Association of Georgia, Augusta, Ga., April, 1912.

elevation some time every day, or occasionally. Most of us formerly concluded, and usually said these patients were much run down, and finally developed tuberculosis. The truth of the matter is the patients with such histories have tuberculosis from the beginning of the decline and we do not make the diagnosis until the classical symptoms show themselves and we have lost valuable time. By simply carefully applying to such cases what we know or what we can learn, the diagnosis can be made much earlier.

Let me state briefly some of the most important points in making an early diagnosis:

1. In all cases of gradual failing in strength, slight decline in weight, the overworked and the fellow who says he needs a spring tonic—exclude carefully tuberculosis, it matters not whose family he or she may come from.

2. Strip all such patients, and in fact all suspects, and give the chest a most searching examination—nothing short of this will suffice. Note the angle the neck forms with each shoulder, compare them. Note the tension of the axillary muscles and also the neck muscles, especially the scaleii. Note the muscles of the chest, etc. Over all, or practically freshly involved inflammatory areas, there is muscular spasm (Pottenger's sign). This muscular spasm is just as apparent over the lungs as over an inflamed appendix or other inflamed areas. The classical drooped or sagged shoulders of the textbooks is a late symptom—not an early one. In early cases the shoulder forms a more acute angle with the neck, due to muscular spasm.

3. Percuss and examine most carefully the apex of each lung and the supra-clavicular space. A slight dullness, a slight increase in vocal fremitus, a little harsh or bronchial breathing, a fine click at the end of the deep inspiration may help to tell the story.

4. In most cases, even of today, tubercular involvement we get an absorption of the sub-cuticular fat and by pinching up the skin on each side at the same time we can note the difference on the affected side—the affected side picking up at a more obtuse angle (Wheaton's sign).

5. You will note dilation of the pupil on the diseased side in a great many cases. Or when both sides are involved, the di-

lated pupil will be found on the most recently involved side.

7. In many tubercular children we get an aortic systolic murmur when the head is thrown far back. This is due to pressure of the enlarged Mediastinal glands against the aorta (Smith's signs). This you may get when it is hard to detect lung involvement even.

8. Prof. McMichael, of Chicago, who has charge of that city's tubercular, is now making the diagnosis by the tactile sense. It is really marvelous to see him run his fingers over a patient's chest and, without any percussion or auscultation, mark out accurately every involved area. This can be learned with surprisingly little practice, or at least caught on to sufficiently to do about as well as one can with percussion. The skin over involved areas has a different feel. It has a peculiar velvety feel, and your fingers feel as if they had slipped up on a slight skid as it were, due I suppose, partly to this muscular spasm.

9. The Von Pirquet, or Moro, test can be most easily given and is very valuable. The cases mainly upon which we do not get a reaction are those which are not tubercular, and those so far advanced that the diagnosis almost makes itself. The injection tuberculin test is also reliable, but much more troublesome of application, as the temperature should be most carefully noted some days before making the test.

10. Then of course we have the sputum examination. A positive finding is always conclusive; **a negative finding is never conclusive.** Bear this in mind.

11. In every family where you have had advanced cases of tuberculosis, or every person who has been constantly exposed to these advanced cases, should be thoroughly examined. This has been recently carried out in some cities and the surprising result has been that more than 60% of the thus exposed have been infected. In general practice, however, I doubt if the percentage would be so great as in the poorer classes of the cities; but by making such examinations I am sure it would enable us to make many early diagnoses which we otherwise would not make and we could thereby nip it in the bud.

Now, as to treatment. Here I must of necessity be brief. I believe with early diagnosis and proper regulation of the life

of the infected individuals, together with certain therapeutic measures, quite a good many tubercular individuals may be cured. I do not think it is safe to believe the most optimistic teacher, nor indeed to pay much attention to the pessimist who tells you they never knew a case to be cured.

There are still some prominent men who make such statements. Rest, and open air, with forced or free feeding are three essential factors in the treatment of practically all tubercular cases. The idea seems to be getting prevalent that tubercular patients cannot be treated outside of sanatoria. These three essential factors can be gotten with some trouble as a rule outside of the sanatoria. Please be reminded that I in no way oppose tubercular sanatorium. In many respects these sanatoria are ideal, and I am glad we have them, and I intend to continue to send some patients to them. But the sanatoriums in the country cannot now accommodate over 10% of the tubercular. What of the NINETY? These must be handled and treated at home. The infected must be cared for and the family and friends must also be protected from infection. Can both of these things be done at home? I think so, and the patient do practically as well at home as he will do anywhere, provided we go to even a little ordinary trouble and care. It is upon the management of this 90% of cases that we must look largely in the future, for mortality reductions and the reduction in the spread of the disease. I am beginning now to have my patients build a nice little open-air room adjacent to their homes, in which they can sleep and live when at home—with ordinary care of the sputum and room the risk of family infection is slight. These rooms can be built for \$35 or \$40, comfortable in every sense of the word, and built after the manner of the cottages at most of the sanatoria. A bell-cord passes to the house to ring for wants if necessary. A large percentage of these incipient cases can come to your office twice a week for tuberculin and examination. Those who cannot come, you can certainly go to see twice a week, just as you could a case of pneumonia, and give them tuberculin.

I will not go into all the details of the treatment of tuberculosis, as most of you are familiar with it, and my paper is now plenty long. But this home treatment can

be made efficient and in some ways better than a sanitarium, especially as it eliminates the loneliness and home-sickness of sanatorium life. With even a little care there is no likelihood of the physician being infected. Such things are almost unknown, as the exposure is not like living with them. However, as a precaution in examining a coughing patient, it is safer to have a flap over his mouth during the examination.

In regard to the use of other things outside of tuberculin, I believe there is good in them. Flesh and strength can be put on much faster with some extra good form of wine or cod liver oil with creosote and guaiacol or such preparations.

THE PRESENT STATUS OF SPECIFICS IN THE TREATMENT OF TUBERCULOSIS *

E. C. Thrash, M.D., Atlanta

The different conceptions of the meaning of the term "specific" causes a difference of opinion among therapists as to what agent is, or is not, a true specific in the treatment of disease. Many think of a specific as being a remedy that infallibly cures in every instance. No such remedy exists. In fact, not understanding each other is the cause of most of our controversies. Holmes says that when A and B enter into an argument there are six individuals in the reckoning: A as he sees himself, A as B sees him, and the real A; B as he sees himself, B as A sees him, and the real B. If these complications could be eliminated handshakes would more often displace combats. In order that this essay may be better understood, I will state in the outset that it will be based upon the following hypothesis: that a specific is a therapeutic agent which produces a direct action in attenuating, weakening, or destroying the organism or factor that is producing the disease. This does not mean that it will cure each time that it is applied, but that properly applied it tends to cure and in some instances does cure, and always by direct action. If we analyze the specifics which have become classic in the treatment of disease, we will find that this

* Read at meeting of Medical Association of Georgia, Augusta, Ga., April, 1912.

description fits them, and they are not absolute in their efficacy.

A number of drugs have been lauded from time to time as cures for tuberculosis—among them are cod liver oil, creosote, guaiacol, iodine, mercury, hetol—all of which have been weighed in the balance and found wanting. Biological products for the past two decades have been tried out most thoroughly, all of which have been discarded as useless except bacterins or vaccines. It has been established by experience that serum or antitoxin is beneficial only in those diseases produced by germs whose chief defense is exotoxins, as diphtheria; while those maladies whose germs carry their chief defense within their body structure (endotoxins) can be attacked only by an agent that will either itself destroy or will build up means in the tissues of destroying this organism that carries a sword in its hand in the form of endotoxins, instead of barricading itself behind a wall of exotoxins. In one instance the fortification must be torn down, in the other the soldier himself must be killed.

The tubercle bacillus comes in this latter class and tuberculin is the only agent we have yet found that satisfies the requirements previously mentioned in producing a specific action upon this organism. It acts as a vaccine, which is an attenuated product of pathogenic germs, or their metabolic derivatives, the purpose of which is to stimulate the tissues to build up antibodies. After the tissues have been trained in destroying these attenuated forms they can, with more force and vigor, attack the more virulent ones. The following question is often asked me: "If a person is already overwhelmed with a poison, why will giving him more of the same poison help him?" If he is overwhelmed it will not help him, and that is the reason vaccines have not been found of value in acute conditions. If the cells are already sick unto death, little good will whipping do to stimulate them to better work. We would not advise exercise for the cure of typhoid fever, because the cells are too thoroughly poisoned already to be driven into doing more work; but we would do so where one has become listless, indifferent, sluggish, and morbid, where there is not so much a condition of sick cells, but of lazy inactive ones that have declared a truce with their enemy.

Here the whip is needed, and in such instances we attempt to stimulate cell activity with vaccines. If the combat between cells and bacteria has progressed for a long period of time with indifferent results, or with the advantage slightly in favor of the bacteria, stimulation and training of these cells will often turn the tide of battle, and produce a complete rout of the offending organisms.

I have worked in this field, groping, feeling, watching, often stumbling, until I feel that I can make the following statement with positive assurance: The proper tuberculin properly administered, where there is a moderate degree of resistance, or a tendency to chronicity, with no caseation, or mixed infection, will cure tuberculosis. My experience in the treatment of tubercular peritonitis, and in pleuritis, every uncomplicated case of which has got permanently well in my hands under the administration of tuberculin, has been largely the cause of my arriving at this conclusion. These serous organs give a better opportunity for studying the specific action of remedies than others, because they are enclosed and the tubercular process is almost certain not to become complicated with pyogenic organisms, and there is not that tendency to form caseous and softened areas, as is found in other organs. Seeing tubercular processes melt away under the administration of vaccines has given me more delight than any of my therapeutic experiences.

One of the greatest obstacles, interfering with the establishment of immunity in tuberculosis, is the histological structure of the tubercle. The building up of this structure on the part of nature is most truly beneficent, as its purpose is to wall in the bacilli and prevent their general dissemination through the tissues, but at the same time the endothelial cells of the capillaries within these tubercles change their functions, cease to form walls for these vessels, and take upon themselves the new duty of becoming building material, in the form of epithelioid cells, in the construction of tubercles. This process leaves the tubercle centrally without blood vessels. Therefore the same process which incarcinerates the bacillus also fortifies it in a measure from invasion by the antibodies, as these antibodies have to reach their destination in the main through the circulation of the blood. This

is one of the handicaps against getting perfect results with vaccine, and is the cause of many recurrences of the disease after apparent cures. However, the antibodies in adequate numbers will usually overcome this obstacle, but when multiple caseous areas make their appearance in these tubercles, the task becomes much more difficult, as these areas contain hordes of virulent organisms wholly protected against any of nature's efforts to destroy them, where (as Niles would say) "they disport themselves in microscopic glee," till they are starved into attenuation, innocuous desuetude, and harmlessness, the result of which is apparent cure; or till they break through the tubercular wall, empty themselves into either or both the haemic and lymphatic circulation, planting themselves in new fields, where they take on increased virulence; or they break through to the outer surface, and are thrown off, leaving an open ulcer to be infected later by pyogenic organisms.

This latter condition marks the point of the parting of the ways between a simple tubercular infection, and that produced by both the tubercle bacillus and other kinds of pathogenic germs with which the tubercle bacillus readily unites its forces. While I would unhesitatingly state that under the conditions previously outlined, tuberculin is a specific for tuberculosis, yet I would not for a moment say it is so in this complex infection where the bacillus of Koch is only one of the offenders. I do not mean to say that tuberculin is contra-indicated here, but where the resistance is sufficiently great and the toxæmia not too profound it will do much good, often being the means whereby the disease is arrested, and ultimately cured.

My efforts now, with the help of my co-worker, Dr. A. H. Bunce, are being directed toward producing a polyvalent vaccine that will, to a degree, be a specific in this mixed infection. We are now using the autogenous vaccines in connection with tuberculin with marked beneficial results, and I am constrained to say that when we learn as much about the vaccine of the pyogenic organisms in tuberculosis, as we now know of tuberculin, the battle will be more nearly won. We have learned some things in their use that we are turning to good, but there is much we still do not know. This we do know, that the pyogenic organisms constantly found in

tubercular sputum are the pneumococcus, streptococcus, and all of the varieties of the staphylococcus, and that as a rule other organisms play but little part in producing the complex commonly called consumption. We know that vaccines made from these organisms, obtained from acute infections other than tuberculosis, is of no value in this disease. We also know that polyvalent vaccine made from these pyogenic organisms found in tubercular processes will lessen the toxemia, decrease the amount of supuration, increase the resistance, and improve the general condition of the sufferer, and, used in connection with tuberculin, will aid its efficacy.

The following problems still confront us: First, what are the relative proportions of the various pathogenic organisms that are invading the tissues in this malady? One might say grow them and make a differential count. This is not dependable because there is no culture medium upon which all these organisms will grow with the same degree of rapidity. The staphylococcus will grow with luxuriance, while all the other may lag, and probably not grow at all. Furthermore, we do not know how many of these organisms are nonpathogenic extraneous ones that have recently taken up their abode with the more virulent types. Second, what should be the relative proportion of each of these organisms in making up the vaccine in order to give maximum results, and what should be the total number injected, at what intervals should we administer the doses, and at what rate should we increase them? Third, what is the comparative value of the attenuated metabolic products of these organisms, to the dead germs themselves. These problems need to be solved, and my efforts now are directed toward their solution.

It is not my purpose to make this essay a working bulletin, as this would necessarily lengthen it too much for the present occasion, but the question as to what tuberculin to use is so often asked that it would not be out of place to give a word to this phase of the subject. One whose volume of work of this kind is not exceedingly large should not be trying them all to find the best. It would be just as reasonable for him to use a different stethoscope at each examination to find which gives him the best service. The one he has used the longest will be the most faith-

ful and dependable. Select one and learn how to use it, and it will be considered the best. Both good and bad results have been obtained from them all. Everything depends upon the man behind the gun. The maker's stamp, however, should carry with it genuineness. The manufacturer of any biological product should be known to be entirely reliable. In my work I have used only those made by Parke, Davis & Co., Mulford, and Alexander, though I would not say there are not others just as good. For the past year I have used only B. E., for the reason that theoretically it contains the properties that stimulate the building up of all the antibodies, as it is made from the whole organisms.

Autogenous B. E. is impractical as its manufacture is too technical to be attempted except by one who is concentrating all his efforts to this class of work, and I deem it unessential, as, in my opinion, the stock preparations satisfy all the requirements and must necessarily be more uniform in their potency, a characteristic almost indispensable.

DISCUSSION ON DRS. HARRIS, HARDMAN, AND THRASH PAPERS

Dr. H. H. Malone said: I understand Dr. Harris to claim that he cured tuberculosis by "compression of the lungs." Such results are impossible; he seems to have a mistaken conception of the nature of the disease. Tuberculosis is a constitutional disease involving the lymphatic system. If the process is further advanced, it is only further evidence of advanced toxemia. Were it possible in pulmonary tuberculosis to replace diseased lungs by normal lungs, the victim would still be tuberculous. Removal of the flower or fruit from the tree does not uproot the tree. Dr. Harris's cases may have recovered in spite of, but not in consequence of "compression."

Dr. Hardman asserts that there has been a reduction of five per cent. in mortality from tuberculosis during the past five years. About five years ago Osler and other prominent authorities estimated that there were one hundred and fifty thousand deaths annually from tuberculosis in the United States. Since then the annual death from tuberculosis in the United States has been placed by members of the International Association for

the Study and Prevention of Tuberculosis at one hundred and fifty to two hundred thousand. How Dr. Hardman arrives at his five per cent. reduction in mortality I fail to see.

His advocacy of the open air mode of treatment is more routine than logical. In 1840 George Bodington ably supported this mode of treatment. The medical profession unanimously repudiated it. During the past thirty-five or forty years it has been generally adopted, and now the hand of segregation is almost in readiness to push it overboard, and a second repudiation of this same imposter is almost in sight. This is indicated by frequent references of representative medical bodies to "the crying need of institutional quarantine." I invite Dr. Hardman, in his closing remarks, to answer, what physiological effect does fresh air exert by which tubercle bacilli may be removed from the lymph glands? There is no fresh air or sunlight in the human system, no ozone or oxygen in the lymph stream and glands, the fountain head of infection, and exposure of the victim of tuberculosis to any condition of air does not alter these fixed conditions.

I regret that the limited time for discussion prevents me from referring to Dr. Thrash's paper and to Dr. Hardman's forced feeding ideas.

Dr. T. J. McArthur, Cordele, said that the subject under discussion was a very interesting one and he rose only to discuss one or two points. It was very important that they should make a diagnosis of tuberculosis early; this was one of the most important features in considering and managing these cases. There were but a few physicians who had engaged in the practice of medicine for many years who could not remember cases of incipient tuberculosis occurring in their practice, that were not recognized then, but which would have been recognized today; this was a terrible commentary upon the medical profession to state this truth. There was a moral responsibility resting upon them in the care of these cases. He asked that they consider the case of a young man fresh from school or college, with high aspirations, and who was ambitious to accomplish something in the world, a boy with bright prospects for the future, with his family and friends looking with pride upon him, expecting him to

write high upon the scroll of fame. Under the unusual strain of college work he would become easily fatigued and tired. He would apply to a physician who would say: "You are overworked." In such an instance when one could not attribute the condition to anything else, tuberculosis should always be considered. We must watch out for tuberculosis; we should watch the pulse; watch the temperature and weight. With a rise in the temperature each day for a considerable length of time, with an increase in the frequency of the pulse, with a gradual diminution in the body weight, unless this could be attributed to some other cause, one should look out for tuberculosis. They who were called upon to assist in these cases should realize their responsibilities; they should realize what it meant to the patients if they did not employ the means at command in determining definitely what the trouble was. As stated yesterday, there was thrust upon them a great responsibility in their dealing with syphilis; a great mistake was made when they diagnosed syphilis when there was no syphilis, and a great mistake also was made when they said there was no syphilis when there was syphilis. In tuberculosis, however, there was not so much harm done if they pronounced a case tuberculosis when there was no tuberculosis present.

Dr. M. A. Clark, Macon, said he rose simply to lay stress upon some of the things that had been stated, and he wished to reiterate that one of the most important adjuvants in tuberculosis is the early diagnosis. He wished to impress, too, upon their minds the importance of the finding of the tubercle bacilli in the sputum, and that the incipient cases did not show these bacilli in the sputum. They might not be experts in auscultation, palpation and percussion, but they all could take the temperatures of their patients. These early cases complain of being run down and readily become tired, especially in the afternoons; then it was incumbent upon them to take the temperature. If there was a slight rise in temperature in the afternoon and with a slight fall in the morning, one should look closely for tuberculosis. In females with a premenstrual rise in temperature, it was pretty safe to diagnose tuberculosis although there were no other signs or symptoms. Do not mistake it and attribute it to ma-

laria. They would find that in such cases they could exclude everything except tuberculosis. An increase in the temperature on exercising and a decrease when the patient was placed in bed, together with the above signs, would lead one to think at once of tuberculosis.

There is no doubt but that tuberculin, when properly used, would hasten the recovery of these patients and would prevent the tendency to relapses. A man in general practice could use tuberculin with benefit. Be cautioned against giving an overdose. Some men gave an overdose of strychnine or morphine and some might give an overdose of tuberculin. Begin with a minute dose and watch the temperature, the pulse and other conditions of the patient. The administration of tuberculin would benefit the patient; even if there was no more than the psychical effect, it was worth while. Any disease that involves the lungs should be treated with as much rest as possible; the more complete the rest, the better for the patient. Pure air and oxygen are necessary. It is not a question of the effect of the fresh air and oxygen upon the bacilli; it is for the purpose of making the patient more comfortable, to better his digestion, to build him up, improve the condition of the blood, increase his resistance, and do all he can to prevent the inroads that were made on his system.

Dr. L. C. Rouglin, Atlanta, said there was one thing of importance that the papers had brought out, tuberculosis was not a disease for the specialist—it properly belonged to the general practitioner who should recognize it and treat it. The caring of the patients by the general practitioner was the only possible solution for the reduction in the number of the cases. As Dr. Hardman had suggested, the sanatoria that they had could only care for about ten per cent. (10%) of the cases. Who, then, would take care of the ninety per cent. (90%)? Dr. Osler said that the early diagnosis was the most important factor and this should be made by the general practitioner and not by the specialist. He had one fault to find with these specialists, and especially those who had sanatoria, they seemed to throw a halo of mysticism over the treatment of their patients which was not practical for the general practitioner to do. However, he believed that the home treatment of the tu-

bercubolus patients was the most successful, especially when properly done; under proper technique and proper care, cure would very often follow. The percentage of cures resulting from the home treatment was larger than the percentage of cures from treatment given in sanatoria or by so-called specialists. Physicians were not doing their duty to their patients when they tried to get rid of them by sending them to specialists.

With regard to the examination of the sputum, he said he was glad Dr. Hardman had brought out the fact that this examination of the sputum was merely confirmatory evidence backing up the physical and subjective findings and should not be taken as the only positive evidence of the disease. Often even in the advanced cases, repeated examination of the sputum failed to reveal the presence of the tubercle bacilli. Very often he saw patients with advanced tuberculosis go to another doctor, then the sputum was sent to the laboratory and the patient would return and say: "I'm all right." This they would attempt to impress upon the physician because the tubercle bacilli had not been found in the sputum. He asked that they bear in mind the fact that the presence of the tubercle bacilli in the sputum was only confirmatory evidence of the disease and did not make a positive diagnosis of the disease.

A most important point in diagnosis was the unilateral rales noted, especially after coughing.

Dr. Claude A. Smith, Atlanta. There is one important point which I did not hear brought out in the paper on the treatment of tuberculosis, and that is the prevention of the disease. Where we find a case of tuberculosis it is our duty as physicians to endeavor to locate the source of infection. Frequently the disease comes from intimate association with some other person in their home or place of business. It is oftentimes surprisingly easy to trace the disease from one individual to another. Therefore, in addition to giving instruction to the patient for the protection of those around him, it is also our duty to endeavor to prevent the further spread by others. In Atlanta we are making steps towards eradicating the disease by urging all who can afford it to go to private sanatoria and when they cannot afford this, the City of Atlanta and Fulton

County have provided a sanatorium where they will be looked after free of charge. When a person applies to the institution we insist upon examining every member of the family and we decline to take one unless all infected cases will go to the sanatorium. The house is then thoroughly fumigated and in this way that focus for the spread of the disease is done away with.

Tuberculosis is costing the people of Georgia millions of dollars annually. This enormous tax with its accompanying high mortality can be stopped in a few years.

To eradicate any disease and to lower our high mortality rate to any great extent it is absolutely necessary that we make provision for the negroes and the poor whites. The negro servants are the most dangerous element as they are most intimately associated with the whites, especially the wealthy class, as they come directly into their homes every day carrying not only tuberculosis but many other diseases as well.

The proper procedure in this work is to locate the cases, particularly the cases among the negroes and poor whites; and then it is the duty of each county or city to make proper provision for the care of these individuals as this is practically the only way in which they can be prevented from mingling and spreading the disease among others.

In conjunction with this work of segregation it is equally important that we educate the rich and poor alike to the great advantages derived from proper living, especially training children. We are just beginning to realize the value and necessity of an abundance of pure air. The sleeping porch is rapidly gaining favor, not only among the medical profession, but the laity as well. In this conjunction I wish to concur with Dr. Clark in what he says that the room with windows open is not the same as a sleeping porch. A room with windows open is productive of drafts which result in colds and sore throats. Colds and sore throats are the entering wedge of most of our contagious diseases. If we avoid colds, we avoid many other serious diseases. The sleeping porch is an almost sure preventive of colds. Children who live on sleeping porches are almost proof against contagious diseases in a serious form. While it is a protection against tuberculosis it also gives prevention of in-

fection to other diseases. It will pay every member of the profession to investigate carefully the value of the sleeping porch and those who are not already doing so will soon be prescribing its use in conjunction with their treatment.

Dr. W. B. Hardman, Commerce, said that his paper was intended for the attention of the men engaged in general practice, and there were a great many others things he might have said. He was convinced that those who were engaged in general practice had to do the great bulk of this work with those afflicted with tuberculosis.

With regard to any criticisms, there were optimists and there were pessimists, and one was about as dangerous as the other. They could not expect to cure every case they saw, nor did they expect to fail to benefit every case they saw. As to how the open air acts they did not know all about it yet. With these patients it was similar to what was seen in nature; they knew that flowers when in the shade or in the dark would not grow as they would when in the open air and in the light. Good rich blood would kill many germs; plenty of good oxygen would give better red blood than would carbon dioxide. Also rest. With these three factors they could accomplish much and without resorting to the use of many drugs.

A point he wished to lay stress upon was that frequently they mistook tuberculosis for malaria and he could recall three cases of tuberculosis which were diagnosed as malaria and treated for malaria, until the patients reached the final stages of the disease when tuberculosis was recognized. These, too, were the hopeless cases. When these patients had chills, fever, and so forth the disease was very hard to diagnose if the attending physician was not looking for it. That was one thing in particular they should be very careful about. He wanted the gentlemen who were doing hard and thorough work in this field of medicine to feel that they were with them. Of course they expected a good deal of them, but they should not forget that it was the general practitioner who did the bulk of this work. Dr. Hardman said he had the kindest feelings and veneration for the men who were engaged in this work.

With regard to Dr. Harris's paper and the treatment he outlined, it might be very valuable but he did not think the treatment would ever become practical for general use. For the general worker he did not believe it ever would become practical. If the diagnosis of tuberculosis was made early, they had other forms of treatment which were of value. If one could make an early diagnosis he believed in keeping these patients at home. They can be treated about as well at home in many cases. But any way a large per cent. of the cases must of necessity be treated at home and we should do it in the most scientific manner.

Dr. E. C. Thrash, Atlanta: Dr. Harris misunderstood my meaning in reference to endotoxins. Endotoxins and exotoxins exist in the metabolic products of all pathogenic bacteria. In these products, however, endotoxins sometimes predominate and sometimes there is a predominance of exotoxins.

Tuberculosis is a disease where endotoxins predominate. These endotoxins are in the body structure of the organisms, and for that reason bacteriolysis is not carried on with the same degree of activity as would be where this state of affairs did not exist. The tubercle bacillus also has a waxy consistency which protects it against bacteriolytic products.

Our clinical observation shows us that in diseases where organisms possess endotoxins to an excessive degree there is a leucopenia, whereas, in diseases where exotoxins predominate there is a leucocytosis. The reason of this is the white blood cells cannot attack the bacteria of the former class with success and, therefore, nature does not provide a superabundance of them. Whereas, those of the latter class can be attacked successfully and, therefore, nature provides a superabundance of white blood cells.

The white blood cells in tuberculosis attempt, in a feeble way, to destroy these organisms, but they "carry a sword in their hands" in the form of endotoxins, with which to protect themselves against their enemy. These organisms possessing this protection forces nature to resort to other means to protect herself against their invasion. She, therefore, builds up granulomata which wall in these germs and prevent them making such wide-spread invasion of the tissues.

In reference to the work of Dr. Harris, I wish to state that he should be congratulated. I have watched this work quite carefully for a number of years and have seen some good results.

The principle reason why I have felt hesitancy in doing more of the same work myself is the uncertainty of what the pathological condition is in a given lung. The most careful diagnostician can only approximate the progress tuberculosis has made by physical examination. One may think after a physical examination that his patient has one fairly good lung, but the real status might be that that lung would be in such an ulcerated, diseased condition that it would functionate most poorly. Ulcerative tuberculosis without exudate or infiltration is the very worst form with which we have to deal, and is often the one that shows the least physical signs.

I had a case in my sanatorium a few days ago that was sent to me by one of the best diagnosticians in the country. He told the patient that he would recuperate after a few weeks and he could then go to Alto and complete his cure. This patient died in ten days. Any of us may at any time make just such a mistake as this.

I do not make this statement to convey the idea that I condemn pneumothorax. I know it to be a good method of treatment in properly selected cases and I have recently installed apparatus for doing this work. I have taken it up because of the reports I have had from Dr. Lapham and Dr. Harris.

TUBERCULIN NOT EVEN A PLACEBO

J. Monroe Anderson, M.D., Pinedale

Having been engaged solely in tuberculosis work for the past five years, during which time I have traveled throughout the United States and come into intimate contact with all phases of tuberculosis work, I feel it my solemn duty to warn the profession against the use of tuberculin.

I have seen so many cases of tuberculosis treated with tuberculin and thereby made worse that I am sure it is high time that the general practitioner should hear both sides of the controversy. Tuberculin is either one of two things, viz.: It is a specific in certain selected cases or it is a

failure. We, who do not believe in it, can prove almost beyond a question of doubt, that even when it is administered by those most experienced it has proven positively harmful. Those who advocate its use have failed absolutely to establish the fact that it has ever effected a cure.

Many of the best men throughout the country are abandoning its use. The reason more men are not condemning it is because they are afraid to condemn anything which has been advocated as a specific in tuberculosis. They realize that the medical world is anxiously waiting any thing that promises results in this class of cases and they are afraid that the right thing will be discovered and they will not be on the popular side.

After it has been thoroughly demonstrated that it cannot be relied on some men are claiming that even if it does no good it does no harm and that it has a good effect on the mental attitude of the patient. I claim that it is very apt to do harm in any case and no matter how or by whom administered and that the patient should be told the truth, "that unless they get well by following the 'fresh air, good food, rest and comfort route' they will never get well at all."

Recently I had a patient who remained at the sanatorium for five months and had her case practically arrested, but because the improvement was too slow they decided to go home and try it awhile. In a short time this patient went to another place where they use tuberculin and was treated by its use. After three months, a man who has charge of one of the largest T. B. Sanatoriums in the State of New York, was visiting in her city and she came home to be examined by him. He found that the lesion had spread almost over the entire surface of both lungs and he told me that he firmly believed that tuberculin was the cause.

Some of the very best men in the State are as hearty in their condemnation of tuberculin as I and if you wish their names I can give them. I do not quote other men without their consent, but will give them to any one by private correspondence.

The men who use tuberculin are praising it from the housetops and on all occasions, and I think it is high time that the general practitioner should know that not all of the tuberculosis specialists advocate its use.

BOOK REVIEWS

SURGICAL AFTER-TREATMENT

Second Edition, practically re-written

Surgical After-Treatment. By L. R. G. Crandon, M.D., Assistant in Surgery at Harvard Medical School, and Albert Ehrenfried, M.D., Assistant in Anatomy at Harvard Medical School. Second edition, practically re-written. Octavo of 831 pages, with 264 original illustrations. Philadelphia and London: W. B. Saunders Company, 1912. Cloth, \$6.00 net; half morocco, \$7.50 net.

This book is the best of its particular type to reach us. It gives more detailed information than others of its class and should appeal especially to the young surgeon and the older practitioner beginning to specialize in surgery, and to the all-round physician of the country or small town, who has to do all kinds of work. Especially will it be of great use to the physician who is to attend a patient after the surgeon has been called and performed such operation as was necessary. The exploratory cuts are numerous and well executed.

INFANT FEEDING

Infant Feeding. By Clifford G. Grulee, A.M., M.D., Assistant Professor of Pediatrics at Rush Medical College; Attending Pediatrician to Cook County Hospital. Octavo of 295 pages, illustrated. Philadelphia and London: W. B. Saunders Company, 1912. Cloth, \$3.00 net.

An excellent and valuable book written on a subject that is verily the foundation of pediatrics. It is the only book of worth exclusively written on this subject by an American author. It's true, such eminent German authorities as Finkelstein, Keller, Czarny and Huebner have given us publications on this important subject, in the past, but their ideas were never enthusiastically received in America, for the simple reason that they did not conform to our cherished ones of percentage feeding. It embodies the up-to-date German literature on this subject, therefore is of great value to an impartial mind, whether he be a percentage, a caloric value, or a general feeder.

It is unique in advising a four-hour interval of feeding or nursing, for the bot-

tle or breast-fed baby. This advice obtains even from birth. We believe the longer intervals of feedings to be a move in the right direction and, while not endorsing the author's views "in toto" along this line, except in cases of digestive disturbances, we are strongly favorable to those of Dr. Abraham Jacobi's of nursing or feeding only every three hours for the first three months, and only every four hours thereafter.

Van Pirquet's ten charts on food tolerance of mother's and cow's milk, portraying the ill effects of over-feeding, acute exanthemata, high temperatures on the food tolerance, is especially instructive and valuable.

With such a divergence of opinions as exist on so important a subject, this book comes as a very welcome visitor. It is clear-cut in its ideas, moderate in its tone, commendably practical, simple yet scientific. It is a perfectly safe book to follow.

We gladly recommend it as a book of worth.

MULHERIN.

PELLAGRA

Pellagra. By Stewart R. Roberts, M.D., Associate Professor of the Principles and Practice of Medicine, Atlanta College of Physicians and Surgeons. Octavo of 272 pages, with 89 illustrations. Cloth, \$2.50. C. V. Mosby Company, St. Louis, Mo.

This, the latest book on a subject concerning which very few books have been written, differs from others in that it is not merely a discussion of the subject, but the result of painstaking investigation on the part of the author. While he lays no decided stress upon any special theory of etiology, yet he is probably the strongest American exponent of Sanbon's theory of the Simulium fly as the carrier, and advances excellent arguments therefor. The chapter devoted to treatment is decidedly more encouraging than those usually found in books on this subject.

The more money The Journal of the Medical Association of Georgia makes out of its advertisements the less it costs the State Association to run the paper. This means that every member of the State Association has an interest in the advertising columns. If one business firm advertises and another does not, patronize the one that does. It is money in your pocket.

THE JOURNAL OF THE MEDICAL
ASSOCIATION OF GEORGIA.

300-302-304 Harison Bldg.

SUBSCRIPTION

PRICE.....ONE DOLLAR PER YEAR

SINGLE COPIES of this calendar year, 15 cents; of the previous calendar year, also 15 cents; two years old, 20 cents; three years old, 25 cents; in other words, 5 cents additional is charged for each year preceding the last calendar year.

REMITTANCES should be made by check, draft, registered letter, money or express order. Currency should not be sent unless the letter is registered. Stamps in amounts under one dollar are acceptable.

CHANGE OF ADDRESS notice should give both the old and the new address, and state whether the change is permanent or temporary. The change notice must reach us ten days in advance of the date of the issue which is to be forwarded to the new address.

WARNING: Pay no money to an agent unless he presents a letter showing authority for making collection.

ADVERTISEMENTS.

Advertising forms go to press eight days in advance of the date of issue. In sending in copy time must be allowed for setting up advertisements and for sending proofs. No proprietary medicines can be advertised until approved by the Council. Advertising rates will be sent on request.

CONTRIBUTIONS.

EXCLUSIVE PUBLICATION: Articles are accepted for publication on condition that they are contributed solely to this journal.

CONTRIBUTIONS TYPEWRITTEN. Authors should have their contributions typewritten—double-space and with ample margin—before submitting them. The expense is small to the author—the satisfaction is great to the editor and printer. We can not promise to return unused manuscript, but try to do so in every instance. Manuscript should not be rolled or folded.

ILLUSTRATIONS: Half-tones and zinc etchings will be furnished by THE JOURNAL when satisfactory photographs or drawings are supplied by the author. Each illustration, table, etc., should bear the author's name on the back. Photographs should be clear and distinct; drawings should be made in black ink on white paper. While we cannot guarantee to return used photographs and drawings, we use our best endeavors to do so after the article is published, if the word "return" is written on the back of each.

ANONYMOUS CONTRIBUTIONS. Whether for publications, for information, or in the way of criticism are consigned to the wastebasket unread.

NEWS: Our readers are requested to send us items of news of a medical nature, also marked copies of local newspapers containing matters of interest to physicians. We shall be glad to know the name of the sender in every instance.

MEDICAL PRACTICE BILL**A Bill**

To be entitled an Act to establish a composite Board of Medical Examiners for the State of Georgia; to define its duties and powers; to protect the people from illegal and unqualified practitioners of medicine and surgery; to define the standing of a medical college; to regulate the issuing and recording of licenses; to define what is considered the practice of medicine; to fix fee for license; to

provide for the revocation of license; to require a standard of preliminary education of applicants; to prescribe penalties for the violation of this Act; and for other purposes.

SECTION 1.

Be it enacted by the General Assembly of Georgia, and it is hereby enacted by the authority of the same, that a Board is hereby established, to be known by the name and style of the State Board of Medical Examiners. Said Board shall be composed of eight practicing physicians of integrity and ability, who shall be residents of, and have been duly licensed to practice medicine in this State, and who shall have graduated from reputable medical schools and have been engaged in the active practice of their profession within this State for at least a period of five years; but none of them shall be connected in any way with any medical college. Said Board shall perform such duties, and possess and exercise such powers, relative to the protection of the public health, and the control and regulation of the practice of medicine in this State as shall be in this Act prescribed and conferred upon it.

SECTION 2.

Be it further enacted, That the Governor shall within thirty days after the passage of this Act, appoint eight physicians, who shall possess the qualifications specified in Section 1 of this Act, to constitute the members of this Board. Five members of this Board shall be regular physicians, two shall be Eclectic physicians, one shall be a Homeopathic physician—all to be appointed by the Governor from the latest lists of names furnished by the respective State Medical Association. The successor of each member shall be an appointee in the same manner. Said members shall be so classified by the Governor that the term of office of two shall expire in one, two in two, two in three, and two in four years from the date of appointment. Annually thereafter the Governor shall appoint two members, each of whom shall serve for a term of four years; and these appointments shall be made so as to preserve the original ratio of Regulars, Eclectics and Homeopaths, respectively. Any vacancy that may occur in said Board, in consequence of death, resignation, removal from the State, or from other

cause, shall be filled for the unexpired term by the Governor in the same manner. A majority of the Board shall constitute a quorum.

SECTION 3.

Be it further enacted, That immediately and before entering upon the duties of said office, the members of said office, the members of said Board shall take the constitutional oath of office and shall file the same in the office of the Governor of the State, who upon receiving the said oath of office, shall issue to each member a certificate of appointment.

SECTION 4.

Be it further enacted, That immediately after the appointment and qualifications of said members, said Board shall meet and organize. Said Board shall elect a president and vice-president from the membership, and a secretary-treasurer who shall be a physician and who, by virtue of his office, shall be an ex-officio member of the Board, whose term of office shall be governed by the pleasure of the Board and whose salary shall be fixed and paid by the Board. All expenses of the Board shall be paid out of funds collected by the Board. Said Board shall hold two regular meetings in each year. One meeting shall be held in May or June at such time as suits the convenience of graduates of medical colleges in Atlanta and Augusta; the other meeting shall be held on the second Tuesday in October in the State Capitol. Call meetings may be held at the discretion of the president. The regular meetings shall be held at the Capitol building in Atlanta, and in Augusta. Said Board shall adopt a seal, which must be affixed to all licenses issued by them. They shall from time to time adopt such rules and regulations as they may deem necessary for the performance of their duties, and shall examine and pass upon the qualifications of applicants for the practice of medicine in this State, as herein prescribed.

SECTION 5.

Be it further enacted, That any person wishing to obtain the right to practice medicine in this State, who has not heretofore been licensed so to do, shall, before it shall be lawful for him to practice medicine in this State, make application to the Board, through the secretary-treasurer thereof, upon such form and in such man-

ner as shall be adopted and prescribed by the Board, and obtain from the Board a license so to do. Unless each person shall have obtained a license as aforesaid, it shall be unlawful for him to practice in this State, and if he shall practice medicine in this State without first having obtained such a license, he shall be deemed to have violated the provisions of this Act. All applicants for a license to practice medicine or for a renewal of any such license which has been revoked, shall furnish the Board with evidence of good, moral character. Applicants from candidates to practice medicine or surgery in any of their branches shall be accompanied with proof that the applicant is a graduate of a legally incorporated medical college or institution in good standing with the Board. The Board shall have the power to revoke the certificate granted to any applicant who makes any misstatement of any material fact in his application for examination. Each applicant shall name in his application the system of practice he proposes to follow, and no person shall use the name of any system unless he holds a certificate from the Board.

SECTION 6.

Be it further enacted, That before any person who obtains a certificate from said Board may lawfully practice medicine and surgery in this State, he shall cause the said certificate to be recorded in the office of the Clerk of the Superior Court of the county in which he resides. The certificate shall be recorded by the Clerk in a book kept for that purpose. It shall be indexed in the name of the person to whom the certificate is granted. The Clerk's fee for recording the certificate shall be the same as for recording a deed. The Clerk shall make a report to the Secretary of the Board on the 31st of December of each year, of all certificates registered with him. Each applicant receiving a certificate from the Board shall cause same to be registered within thirty days.

SECTION 7.

Be it further enacted, That said Board shall be empowered by this Act to pass upon the good standing and reputability of any medical college. Only such medical colleges will be considered in good standing as possess a full and complete faculty for the teaching of medicine, surgery, and obstetrics in all their branches, afford

their students adequate clinical and hospital facilities, require attendance upon at least 80 per cent. of each course of instruction, give four graded courses of instruction, the aggregate of which amounts to at least one hundred and twenty weeks, exclusive of holidays, of at least forty hours each week; that require at least forty-two months to have elapsed between the beginning of the student's first course of medical lectures and the date of his graduation, each session composed of twenty-nine weeks of actual instruction, with at least forty per cent. of laboratory instruction in the first and second years, and a minimum of thirty-five per cent. of clinical work in the third and fourth years; that require an average grade in each course of instruction of at least seventy-five per cent. in examination as a condition of graduation; that fulfill all their published promises, requirements and other claims respecting advantages to their students and the course of instruction; that enact a preliminary educational requirement equal to that specified by this Act; that require students to furnish testimonials of good moral standing; and that give advance standing only on cards from accredited medical colleges. Students must have attended at least ninety per cent. of the course in the last year of the college from which diploma is presented. In determining the reputability of the medical college, the right to investigate and make a personal inspection of the same is hereby authorized.

SECTION 8.

Be it further enacted, That beginning with the session of 1912 and 1913, each medical school or college in good standing with the Board shall have a minimum preliminary educational requirement of twelve Carnegie units.

SECTION 9.

Be it further enacted, That in the discretion of the secretary-treasurer of said Board, with the approval of the president, he may issue temporary license to an applicant, which shall have the same force and effect of a permanent license until the next regular meeting of the Board, when said license shall become void. Said license shall not be recorded.

SECTION 10.

Be it further enacted, That examination

of applicants for license to practice medicine shall be made by said Board according to the methods deemed by it to be the most practical and expeditious to test the applicant's qualifications. Where the Board requires the examination to be in writing, each applicant shall be designated by a number instead of his name, so that his identity shall not be disclosed to the members of the Board until after the examination papers are graded. Examination shall be on the following subjects: Anatomy, physiology, chemistry, pathology, surgery, obstetrics, practice, pediatrics and other subjects in the discretion of the Board. Students may be examined on anatomy, physiology, chemistry, materia, histology, bacteriology and embryology and given credit for same after having completed two years of instruction.

SECTION 11.

Be it further enacted, That there shall be paid to the secretary-treasurer of said Board by each applicant for a license by examination, a fee of twenty dollars, which shall accompany the application. The same fee shall be charged for issuing a temporary license, which includes fee for examination for permanent license; and a fee of fifty dollars shall be charged for issuing a license by reciprocity. No part of any fee is returnable under any circumstances. Nor shall this Act be construed as affecting or changing, in any way, laws in reference to license tax to be paid by physicians and surgeons.

SECTION 12.

Be it further enacted, That said Board shall have authority to administer oaths, to summon witnesses and to take testimony in all matters relating to its duties. Said Board shall issue licenses to practice medicine to all persons who shall furnish satisfactory evidence of attainments and qualifications under the provisions of said Act and the rules and regulations under the provisions of this Act, and the rules and regulations of the Board. Such license shall be signed by the president and attested by the secretary-treasurer of the Board under its adopted seal, and it shall give absolute authority to the persons to whom it is issued to practice medicine in this State. It shall be the duty of the secretary-treasurer, under the direction of the Board, personally or by deputy, to aid the solicitors of the State in the enforcement

of this Act, and in the prosecution of all persons charged with violation of any of its provisions.

SECTION 13.

Be it further enacted, That said Board may refuse to grant, or may revoke a license to practice medicine in this State, or may cause a licentiate's name to be removed from the records in the office of any Clerk of Court in the State on the following grounds, to-wit:

The employment of fraud or deception in applying for license or in passing the examination provided for in this Act; conviction of crime involving moral turpitude; the practice of medicine under a false or assumed name, or the impersonation of another practitioner of a like or different name; habitual intemperance in the use of ardent spirits, narcotics, or stimulants to such an extent as to incapacitate him for the performance of professional duties; the procuring or aiding or abetting in procuring a criminal abortion; the obtaining of a fee on representation that a manifestly incurable disease can be permanently cured; causing the publication and circulation of an advertisement of any medicine by means whereby the monthly periods of women can be regulated, or the menses, if suppressed, can be re-established; causing the publication and circulation of an advertisement relative to any disease of the sexual organs. Said Board may at any time within two years from the refusal or revocation of a license or cancellation of a registration under this Section, by a majority vote, issue a new license or grant a license to the person affected restoring or conferring all the rights and privileges of and pertaining to the practice of medicine as defined and regulated by this Act. Any person to whom such rights and privileges have been so restored shall pay to the secretary-treasurer a fee of twenty dollars on the issuance of a new license.

SECTION 14.

Be it further enacted, That the terms "practice of medicine," "to practice medicine," "practicing medicine," and "practice of medicine," as used in this Act, are hereby defined to mean holding oneself out to the public as being engaged within this State in the diagnosis or treatment of diseases or injuries of human beings; or the suggestion, recommendation or prescribing of any form of treatment for the intended

palliation, relief or cure of any physical or mental ailment of any person, with the intention of receiving therefor, either directly or indirectly, any fee, gift or compensation whatsoever; or the maintenance of an office for the reception, examination and treatment of any person suffering from disease or injury of body or mind; or attaching the title "M.D.", surgeon, doctor or any other word or abbreviation to his name, indicative that such person is engaged in the treatment or diagnosis of diseases or injuries of human beings. If any person shall hold himself out to the public as being engaged within this State in the diagnosis or treatment of diseases or injuries of human beings; or shall suggest, recommend or prescribe any form of treatment for the palliation, relief or cure of any physical or mental ailment of any person with the intention of receiving therefor, either directly or indirectly, a fee, gift or compensation whatsoever; or shall maintain an office for the reception, examination or treatment of diseased or injured human beings; or shall attach the title "M.D.", surgeon, doctor or any other word or abbreviation to his name indicative that he is engaged in this State, in the treatment of diseased or injured human beings; and shall not in any of these cases, then possess, in full force and virtue, a valid license to practice medicine under the laws of this State, he shall be deemed to be practicing medicine without complying with the provisions of this Act and violation thereof. Nothing in this Act shall be construed to prohibit gratuitous service in the cases of emergency, nor the practice of the religious tenets or general beliefs of any church whatsoever, nor prescribing medicine or administering drugs. Nor shall it apply to commissioned surgeons of the United States Army, Navy or Public Health and Marine Hospital Service, while so engaged, nor to regular licensed physicians called from other States or Territories to attend to special cases in this State, nor to the practice of dentistry, nor to mid-wives or nurses.

SECTION 16.

Be it further enacted, That any person guilty of practicing medicine in this State without complying with the provisions of this Act, or any person who shall violate the provisions of this Act, shall be deemed guilty of a misdemeanor, and upon conviction thereof,

shall be punished as for a misdemeanor according to Section 1039 of the Penal Code of Georgia, Volume III. Any person presenting or attempting to file as his own the diploma or certificate or credentials of another, or who shall give false or forged evidence of any kind to the Board, or any member thereof, in connection with an application for a license to practice medicine, or shall practice medicine under a false or assumed name, or shall falsely impersonate another practitioner of a like or different name, shall be deemed guilty of a felony, and upon conviction thereof shall be punished by a fine of not less than \$500.00 or more than \$1,000.00, or by a term from two to five years in the penitentiary of this State, subject to the provisions of Section 1039 of the Penal Code of Georgia.

SECTION 17.

Be it further enacted, That on investigation of an applicant's credentials from another State Board, this Board may, when convinced that he is qualified to practice medicine, grant him a license without further examination.

Be it further enacted, That all laws and parts of laws in conflict with this Act be, and the same are, hereby repealed. This law does not apply to Osteopaths so long as they do not prescribe, dispense or administer drugs.

THE GENERAL ASSEMBLY

Our editorial space is taken up this month by the Medical Practice Bill, as we feel that it is of more import to the members of the Association, that they familiarize themselves with the matter contained in this bill, than with anything we might write. As was to be expected from a body of intelligent men, this bill had the hearty support of the Senate and has passed that body without opposition. The House Committees of Hygiene and Public Health, and Judiciary have unanimously reported favoring it, after having a full discussion pro and con as to its merits. As was to be expected, again, its passage was opposed by a number of representatives of the various pseudo-medical cults, as well as some disgruntled, disappointed, discredited and discarded doctors.

We presume the usual tactics of amending, substituting, etc., will be adopted to

delay action on this important bill, and thus prevent its passage at this session. Therefore we urge that every member confer with his representatives and ask their assistance in furthering the progress of medicine and the public health by insisting that this bill come to a vote. Kindly let the idea simmer in their consciences that the doctors of Georgia have their eyes on them.

AN ORGANIZER IN THE FIELD

The Bureau of Organization has employed Dr. T. J. McArthur, of Cordele, an ex-president of the Association, to deliver educational addresses and organize societies throughout the State. All members should appreciate the self-sacrificing spirit of Dr. McArthur and assist him in every way possible.

His work will be done under the direction of the Council and each Councilor will assist him while he is his district.

NEW MEMBERS SINCE LAST ISSUE

Dr. H. Clay Foster.....	Union Point, Ga.
Dr. H. L. Barker.....	Carrollton, Ga.
Dr. W. J. Dismuke.....	Ocilla, Ga.
Dr. G. W. Willis.....	Ocilla, Ga.
Dr. T. D. McKown.....	Pittsburgh, Ga.
Dr. W. W. Calhoun.....	Ft. Gaines, Ga.

GEORGIA HOMEOPATHIC MAY REPORT


Dr. R. E. Hinman, secretary of the Homeopathic Board of Medical Examiners, reports the written examination held at Atlanta, May 8, 1912. The number of subjects examined in was 10; total number of questions asked, 100; percentage required to pass, 75. Only one candidate, a graduate of the Hering Medical College, Chicago, 1910, was examined, and he passed with a grade of 78. One candidate, a graduate of the Detroit Homeopathic College, 1911, was licensed through reciprocity with Michigan.

PEDIATRICS

W. Z. HOLLIDAY, M.D.
Atlanta

W. A. MULHERIN, M.D.
Augusta

M. A. CLARK, M.D.
Macon

 *Remember that approximately one-fourth of all deaths occur in the first year of life. A good reason for careful study of Pediatrics.*

PEDIATRICS IS ENTITLED TO MORE CAREFUL STUDY

The babies of today will be the fathers and mothers of tomorrow. If they be nourished and cared for properly, during infancy and childhood, they will grow to manhood and womanhood strong in mind and body. The race will be the hardier for the study and time given them. If they be poorly nourished and cared for, a very large number will die; the balance will grow up weaker, mentally and physically, due to a lack of study and time that should have been given them and to which they were justly entitled to.

It's a well-known fact that the general practitioner gives very little study to the subject of pediatrics. Is this right? Is it "carrying squarely" with the infant and child whose mother has implicit confidence in her physician, believing that her baby is receiving the best of study and attention.

I do not wish to be misunderstood. I disclaim any intention of wishing to belittle the general practitioner. Furthermore, I am not of belief that the general practitioner should not study and practice pediatrics. On the contrary, I think he should, but in so doing he should recognize the responsibility that goes with it, a reasonable length of time for its proper study.

Pediatrics is entitled to a fair division of the general practitioner's studying hours. Let us take the average practitioner and divide up his clientele. A reasonably low estimate of infants and children's work done by him will be easily one-fifth of his general work. Does he give one-fifth of his studying time to pediatrics? With few exceptions, it must be answered in the negative. As a strictly

business proposition, or as a matter of equity, pediatrics is entitled to this much of his time.

Consider the subject along the line of infant mortality. It will appeal to every true physician most forcibly. Infant mortality is, today, most astounding. In my humble opinion the most important single factor in successfully contending with this proposition lies in the education of the profession to a thorough knowledge of pediatrics, especially, I should say, a thorough knowledge of a simple and proper method of infant feeding. The campaign against tuberculosis has rightly stirred the whole world into a feverish and determined desire to fight and stamp it out. We commend this noble work, for it claims a little over ten per cent. of all deaths.

Infant mortality, however, is a much greater and more important proposition. It is not today receiving its due consideration. Statistics show us that approximately **one-fourth of all deaths occur in the first year of life and that of these about sixty per cent. are due to gastro-intestinal disturbances—a preventable disease.** Of the other forty per cent. of those young infants who die from other causes, many could be saved if gastro-intestinal complications could be avoided. When these appalling facts confront us, our duty as physicians should spur us to greater efforts to attain such knowledge as will help us save the little ones entrusted to our care.

This knowledge cannot be attained by intuition, it requires study. Therefore we feel it our duty to call the attention of the profession to this discrimination against a very important subject, pediatrics. We do it in a kindly way and solely for the purpose of asking assistance from the general practitioner. Let's all "get together" and see if we cannot do our share in low-

ering the disgracefully high infant mortality, by giving a little more time and study of pediatrics. W. A. M.

PURE CULTURE OF THE TRUE BACILLUS LACTIS BULGARICUS IN TREATMENT OF INTESTINAL DISEASES OF INFANCY

Dr. Ralph Oakley Clock has written a decidedly valuable paper entitled "Intestinal Implantation of the *Bacillus Lactis Bulgaricus* in Certain Intestinal Conditions of Infants, with Report of Cases." It appeared in the A. M. A. Journal of June 29, 1912.

If further and more extensive observations will bear him out in his very brilliant results, his paper will truly prove to be an epoch-making article.

We are taking the liberty of quoting freely from his article, in order to give the gist of it. Dr. Clock says:

"Buttermilk has been widely used in infant-feeding because its chemical composition was supposed to be adapted to certain abnormalities of digestion and metabolism; but the results obtained from its use have been variable, since buttermilk is not always adapted to the caloric needs of the infant.

"A few years ago, I reported¹ a series of cases in which buttermilk was used as a dietetic treatment for malnutrition, enteritis, enterocolitis, etc., and many similar cases have been reported by various writers from time to time. While the prostration and toxic symptoms were usually lessened under this regimen, some infants fared badly on the diet, so that the dietetic treatment was usually supplemented by medicinal methods; hence, any improvement in the condition could not be attributed solely to the presence of lactic acid bacilli in the milk. Moreover, the buttermilk was sometimes boiled in the process of making the feeding mixtures, so that the lactic acid bacilli were destroyed.

Buttermilk is not effective in the treatment of intestinal conditions, because it does not contain a bacillus that will survive ingestion, multiply in the intestine, and there produce sufficient nascent lactic acid so that the bacilli of putrefaction cannot exist. Any beneficial effects that have been derived from buttermilk feeding may

be ascribed chiefly to the large amount of soluble protein furnished in finely subdivided form which admits of easy digestion. But even when the buttermilk has been pasteurized and then inoculated² with a pure culture of lactic acid bacilli, the results have not been entirely successful. Dunn³ obtained favorable results with this method in twenty-three out of thirty-five cases.

The observations of Metchnikoff and other bacteriologists on the antagonism of lactic acid bacilli to putrefactive organisms in the intestine have opened up a new method of treatment which is constantly gaining in popularity.

The fact that intestinal toxemia is considered so potent a factor in the causation of many diseases has encouraged the belief that by introducing cultures of lactic acid bacilli into the intestine it would be possible to arrest the growth of putrefactive and other pathogenic bacteria.

Among the various lactic acid-producing bacteria, it was found by Metchnikoff that the *Bacillus lactis bulgaricus*, isolated and first described by Grigoroff,⁴ exerts the most pronounced effect in inhibiting the growth of putrefactive bacteria, this bacillus producing more than three per cent. of lactic acid. Metchnikoff discovered that the pathogenic bacteria which create putrefaction will not live in the presence of the *B. lactis bulgaricus*, which, he found, is the only lactic acid bacillus known that will survive ingestion, reach the large intestine, and continue to live there, creating nascent lactic acid and thereby displacing the pathogenic bacteria. He also found that, when the *B. lactis bulgaricus* is taken into the organism in the form of a culture, either in dry tablets or in milk, this bacillus multiplies in the intestine and creates nascent lactic acid as long as it is present.

Belonowsky⁵ has shown that the lessened virulence of the intestinal flora, which occurs when the *B. lactis bulgaricus* is introduced into the intestine, is due in part to

²Dunn: The Use of Living Lactic Acid Bacilli to Combat Intestinal Fermentation in Infancy. Arch. Pediat., April, 1907.

³Dunn: The Treatment of Infantile Diarrheas Due to Intestinal Fermentation with Lactic Acid Bacilli. The Journal A. M. A., August 21, 1909, p. 599.

⁴Grigoroff: Etude sur un lait fermenté comestible: le kisselo mleko de Bulgarie, Revue med. de la Suisse romande, 1905, xxv.

⁵Belonowsky: Influence du ferment lactique sur la flore des excréments des souris, Ann. de l'Inst. Pasteur, 1907, xxi.

¹Clock, R. O.; Modified Buttermilk in Infant-Feeding. New York Med. Jour., April 20, 1907.

lactic acid and partly to the inhibitory products formed by the *B. lactis bulgaricus*.

Cohendy⁶ and Herter found the *B. lactis bulgaricus* in the excreta of a patient from four to six days after its first ingestion, and six weeks to two months after the last administration.

It has long been known that the growth of one organism will inhibit the growth of another, but this knowledge has seldom been applied in practice. I have experimented with various preparations, supposed to contain the *B. lactis bulgaricus*, but without any definite result. It has been difficult to obtain a pure culture of this bacillus, most of the preparations now on the market consisting chiefly of paralactic bacilli.⁷

Through the Johns Hopkins Hospital, however, there has been imported from the Pasteur Institute a pure culture of the true *B. lactis bulgaricus*; this has been developed into an all-rod culture, showing only viable organisms. The culture is dried and mixed with milk-sugar, in which the bacilli will remain active a long time, and compounded into a tablet. The literature contains no reports of this particular bacillus having been introduced into the system through the medium of milk-sugar for the purpose of combating intestinal putrefactive conditions.

The cases which I desire to report show the results obtained by me in bottle-fed babies with this new method of treatment, in such conditions as gastro-enteritis (mild, severe and toxie forms) and enterocolitis. Some of these cases were of the most severe type of gastro-intestinal disturbance, but in every case a decidedly effective and happy result followed. The gastric symptoms quickly disappeared; the toxemia subsided; mucus and blood disappeared from the stools, which soon lost their foul odor; the indigestion cleared up, and the stools became well formed and normal in color usually on the third or fourth day; and there was never any return of the intestinal disturbance in any case. The intelligent care given to these infants in their homes, where the best of hygienic conditions prevailed, probably aided in bringing about these rapid and favorable results.

As these cases were all seen in private practice, there was no opportunity for studying the bacteriologic effect on the intestinal flora; but the remarkably decisive clinical results, just mentioned, prove conclusively that the putrefactive and other pathogenic bacteria of the intestine were displaced by the action of *B. lactis bulgaricus*.

In each of the cases, the treatment consisted solely of the administration of tablets containing a pure culture of the *B. lactis bulgaricus*. One tablet, dissolved in a teaspoonful of water, was given after every bottle feeding; and in some cases the tablets were given before as well as after the feedings.

The excellent results obtained from this method of treatment in the first three cases persuaded me to continue the treatment without change of diet, and thus test the reliability of the bacilli as a means of combating the putrefactive process in the intestine; hence, no change was made in the feeding mixture of any of the patients. A starvation diet, accompanied by purgation, colonic irrigation and the administration of bismuth, is productive of loss of weight and strength, and serves to prolong the course of the disease.

The gain in weight which followed in every case under the implantation method of treatment was probably due to the fact that, after the putrefactive process had been arrested by the action of the *B. lactis bulgaricus*, the digestive tract was able to take care of the food which previously had caused indigestion; hence, the food began to satisfy the caloric needs of the infant and nutrition thus suffered no loss."

Dr. Clock then goes on to give a detailed history of twenty-two cases with results, only giving *Bacillus lactis bulgaricus* as treatment. These cases cover the various digestive derangements, even the inflammatory conditions (ileo-colitis).

He summarizes and concludes as follows: "1. The infants varied in age from 5 weeks to 10 months; there was one 5 weeks old; one 6 weeks old; one 8 weeks old; one 2 months of age; four were 3 months old; three were 4 months old; two were 5 months old; three were 6 months old; two were 7 months old; two were 8 months old; and there was one 9 months old, and one infant 10 months old.

2. There were two cases of enterocolitis and twenty cases of gastro-enteritis; of

⁶Cohendy: Description d'un ferment lactique puissant capable de s'acclimater dans l'intestin de l'homme, Comp. rend. Soc. de biol., 1906, 1.

⁷White and Avery: Observations on Certain Lactic Acid Bacteria of the So-Called *Bulgaricus* Type, Centralbl. f. Bakteriologie, 1909, xxv, Part 2.

the latter, five were of the mild form, nine were of the severe type, and six were toxic.

3. The duration of the gastro-enteritis, prior to the institution of the implantation method of treatment, was from one day to five days in the mild forms; from one day to two weeks in the severe types; and from one week to two weeks in the toxic forms. The intestinal condition had persisted in the two cases of enterocolitis from two to four weeks.

4. The two cases of enterocolitis had resisted other methods of treatment, but quickly responded to the implantation method.

5. Decided improvement followed in every case within twenty-four hours after beginning treatment.

6. The putrefactive process entirely disappeared, and the stools became normal in consistency and color on the fourth day, as a rule; and by the end of a week, in spite of previous loss, the weight had increased, on an average, $4\frac{1}{2}$ ounces.

7. The results were complete and permanent in every case; there was not a single failure or relapse.

8. Since the culture was mixed with milk-sugar, the tablet quickly dissolved in water and was readily taken by the babies.

9. One of the great advantages of this method of treatment is that it is unattended with any untoward effect, 20 tablets having been given in the twenty-four hours to infants of 5 and 6 weeks of age.

10. Another advantage is that the treatment does not conflict or interfere in any way with the diet of the baby.

11. The diets consisted of condensed milk, top-milk formulas, milk modified with proprietary foods, whole milk and barley water, peptogenic milk, whey and dextrinized barley gruel and modified milk with milk-sugar.

12. The favorable results that followed in Cases 2, 5, 15 and 21, which were on a diet of condensed milk, were due to the fact that the *B. lactis bulgaricus* flourishes best in a rich carbohydrate medium, whether this be lactose, maltose, saccharose or glucose.

13. Vomiting invariably ceased on the second day. This is to be explained by the fact that, after the putrefactive process in the intestine had been controlled, the reflex condition in the stomach quickly subsided.

14. Fever was absent in the mild and severe gastro-enteritis cases.

15. The temperature which had been present in all of the cases of toxic gastro-enteritis and in the enterocolitis cases quickly dropped to normal under the implantation treatment.

16. With one exception, there was steady gain in weight on this method of treatment.

17. Patient 22 had been rapidly losing weight up to the time of beginning the implantation treatment; and while there was a temporary loss during the first three days, the weight after this time steadily increased and showed a gain of 5 ounces at the end of the first week.

18. The average gain in weight during the first week was $4\frac{1}{2}$ ounces.

19. After the stools became normal, the dried culture was administered three times daily for a period of one to two weeks.

20. The negative results previously obtained with the various other dried cultures were unquestionably due to the small numbers of the true *B. lactis bulgaricus* present in the tablets, which contained chiefly the paralaetic bacilli.

21. The results in the cases reported were due solely to the action of the *B. lactis bulgaricus*, since no other therapeutic measures were employed, nor was the diet altered in any case.

PLAGUE IN PORTO RICO

Twelve cases of bubonic plague with five deaths were reported in the district of San Juan, Porto Rico, between June 14 and 19, and extreme measures are being taken to prevent an epidemic in the island. Measures have also been taken to prevent the entrance of the disease into the port of New York, and the Health Officer of the Port has issued an order that after July 1 all ships from the tropics shall be thoroughly fumigated before entering the harbor, unless it is certified that proper disinfection has been carried out at the port of departure.

FIRST DISTRICT MEDICAL SOCIETY

The midsummer meeting of the Medical Society of the First Congressional District will be held at Savannah on Monday, August 12, 1912.

OBSTETRICS

H. McHATTON, M.D.
Macon

A. J. KILPATRICK, M.D.
Augusta

R. L. MILLER, M.D.
Waynesboro

TOO HASTY LIGATION OF UMBILICAL CORD

Early ligation of the cord, to say the least, is a thoughtless procedure. To tie the cord the instant the child cries or breathes is a serious handicap to the child in its fight for existence. If the funis is left untied circulation in the vein generally ceases within four or five minutes, and the pulsation in the arteries in about eight minutes, the cessation passing from the placental end towards the child. If the cord is not cut until about one minute after pulsation has ceased there is hardly any bleeding from the placental end. If, however, it is tied and cut as soon as the child cries, a considerable quantity of blood escapes, the amount of which was found by Budin to be on the average about three ounces (88 grms.) greater than in the former case. It may be inferred that this amount of blood is transferred from the placenta to the child during the few minutes after birth, partly from the thoracic asperation during inspiration, partly from the effect of the pressure of the uterus on the placenta; and that it serves to supply the extra amount of blood required to fill the pulmonary circulation at the time when the lungs take the place of the placenta as organs of respiration.

Therefore, to tie the cord immediately is equivalent to bleeding the child to the extent of three ounces. General experience shows, and such observers as Hofmeier, Zweifel, and Reibmont declare that the children are more vigorous after late ligation of the funis, suffer less loss of weight in the few days following delivery, and more quickly begin to gain weight again.

Hence we may conclude that the extra amount of blood is of decided advantage to the new-born infant, especially as it gains very little nourishment from its mother during the first two days. If, therefore, there be no necessity for haste on account of the condition of the mother, or in order to resuscitate an asphyxiated child, the cord should not be tied until

the pulsations, near the placental end, have stopped for a minute or more.

KILPATRICK.

HEMORRHAGE INTO THE PERITONEAL CAVITY CAUSED BY ACCIDENTAL RUPTURE OF THE OVARY

Dr. Alexander Primrose, Toronto: The two cases seen by me were not connected with pregnancy. In both instances what appeared to be a normal graafian follicle had ruptured as the result of an accidental strain. In one instance, the patient lifted a heavy weight and the rupture immediately occurred. In the other case the patient had a violent attack of vomiting in the early stage of an acute appendicitis and this brought about a similar result. In both instances serious hemorrhage occurred into the peritoneal cavity and almost proved fatal in one of the patients. The sequence of events in the latter case was quite obvious. The patient had an attack of acute appendicitis two days before her monthly period was due, and a violent attack of vomiting had brought about rupture of a graafian follicle. The hemorrhage into the peritoneal cavity had been slow and had shown no symptoms but was only discovered when the abdomen was opened for the removal of the appendix twelve hours afterward. Had the patient been left until morning not only would she have run considerable risk from an attack of acute suppurative appendicitis, but she might have lost her life from hemorrhage. These two cases have some points in common. Thus, an accidental strain caused rupture of an ovarian blood-cyst and induced the hemorrhage. In both the graafian follicle was ruptured two days before a menstrual period was due. In each instance the extravasated blood was clotted in the pelvis and had remained fluid in the upper part of the peritoneal cavity.

TUBERCULOSIS

C. H. RICHARDSON, M.D.
Montezuma

T. E. OERTEL, M.D.
Augusta

J. H. HAMMOND, M.D.
LaFayette

THE STATE TUBERCULOSIS SANI- TARIUM

The people of Georgia are interested in her public institutions and none more than her State Sanitarium for the cure and educational treatment of the consumptive. Having been on the executive committee that has been instrumental in building and equipping this sanitarium from its incipency, I deem it meet and proper that the profession and people generally should know something of this fight which we are making upon what is properly termed the "Great White Plague."

This sanitarium was built in 1910, in the valleys of Rabun County, a climate free from moisture as El Paso and equal in health to the mountainous regions of Colorado. It is located on the Southern Railway, seventy-four miles from Atlanta, four miles south of Mt. Airy. Its nearest station is Alto, Ga. We have an infirmary building and five cottages, only sufficient to accommodate sixty-five patients. We are sadly in need of five additional cottages to accommodate fifty more patients. There is a crying demand for more room. We are unable to accommodate all who apply. Many have to wait for a month or longer before getting admission. We now only ask the Legislature to appropriate \$15,000 at this session to enable us to build these five cottages and improve our sewerage plants. Will not Georgia rise up and demand that the Legislature give us this amount which we need so badly? We have a dairy herd of fourteen Jerseys that supply milk to the inmates. We have spent on infirmary, cottages, water and electric plant the sum of \$55,000. The number of patients, as I said before, which we are able to accommodate is sixty-five. The number of patients treated since the sanitarium was opened is as follows: Males, 144; females, 74, which makes a total of 218 patients. The number of deaths since the sanitarium opened is as follows: Males, 6; females, 2, which makes a total of 8.

During his stay with us the patient is constantly instructed in the hygienic principles underlying the treatment of tuberculosis, with the hope that he may carry them out after his return home, and thus complete the "cure," or at any rate lengthen his days.

He is taught that tuberculosis is a communicable disease and the proper methods to pursue to avoid transmitting it to others.

In 1911 we received all we could accommodate, free. On account of the Legislature in 1911 cutting short our appropriation, we have been compelled this year to allow only 25% free patients, 75% to pay the small sum of \$3.50 per week, which covers all expenses such as food, laundry, etc.

At the opening of the sanitarium it was our intention to allow entrance only to the incipient cases. But this rule has been hard to enforce, for many are here now well advanced in the second and a few in the third stages of tuberculosis.

For self-protection and to prevent being imposed upon, we have selected physicians in various sections of the State, (usually about four physicians to each congressional district) to whom all patients who desire admission to the sanitarium should first go and be examined, in order to determine whether they are affected with tuberculosis and are fit subjects for the sanitarium.

This is the fight Georgia is making upon tuberculosis, but we are in need of further appropriations to enlarge our plant that we may meet the crying demand for more room.

As I have said before no more ideal or picturesque location could be found this side of the Alps. The cottages all face the south, patients stay out on verandas, which are encased in glass; they bask in the sunshine and enjoy the invigorating climate and Nature's beautiful scenery.

We hope that at no distant day this plant will be so enlarged and improved that every poor consumptive of the State

will find it a home of rest, be enabled to enter its doors and by judicious treatment, with the aid of the invigorating climate, may finally be restored to health.

C. H. R.

A TRUE STORY

A long time ago, when we were little children, you remember that we were wont to climb on the knee of some old and wiser person, such as occasion presented, and plead for a "true story." Romance has a glamor about it, but after all—truth is stranger than fiction. So I will tell you a true story.

Tom Smith worked on the railroad. He was conductor of a freight train and his wage supported in comfort Maggie and the children, of which there were four. But after all, the wage of a freight conductor, after spreading over the necessities of life, or rather the lives of six, does not leave much of a balance at the end of the month. So when Tom took sick, first with a bad cold, which refused to get well, and then with pleurisy, which laid him up for six weeks, even the sick benefits did not suffice to buy all that was needed.

But Tom was not strong when he got about again. His cough stuck to him and he had weak spells and hot flushes and sometimes he thought he had fever and several times he had a chill.

The doctor told him he was "full of malaria," and dosed him on calomel and quinine, but somehow the medicine did not seem to help him much and the chills would come now and again, especially if he over-exerted or had a wearisome run. One night he stooped to throw the lever of a switch and when he straightened up his mouth was full of something, which he spat out and, by the light of his lantern, saw was blood. There was more and more of it and he had to give up and take to bed again. His fever rose and he had another chill and more quinine and calomel, though the doctor said he was afraid Tom's lungs were affected. Maggie did the best she could. Of course she had to act as nurse. Of course, also, there were the household duties to attend to—such as cooking and washing and ironing and sweeping and the like, and the care of four children.

The sick benefits helped, but they were

not enough to make ends meet, and so Maggie took in sewing to help out. Tom did not get well. I wish I could say that he did, but this is a true story, and so I must say he died.

Maggie—I was about to say made a living, but this is a true story, so I will say instead—managed to eke out an existence for herself and four children by sewing. Then the baby came. It was not very welcome, for it meant another care. But when God sends children, what is to be done but accept them? So Maggie took it to her motherly breast and fed it on her heart's blood. The five children and Maggie lived in one room. For the most part the rent was behind for that. Maggie had to sew rather late o' nights and the smoky lamplight hurt her eyes and gave her a cough. Jimmie had a bad cold, too. Jimmie was ten now and some help to his mother.

Maggie was too poor to pay for a doctor and so she called in the city physician—the "poor doctor." He told her she had lung trouble, consumption in fact, and she must stop work and go to the country and rest. She **rest!**—and five children to feed and clothe.

So Maggie still takes in sewing. Jimmie has consumption, too, the doctor says. Jimmie carries papers and does what he can. And Maggie takes in sewing.

MORAL: All true stories should have a moral. This one has several. Perhaps you have seen some of them. I cannot say that I know just how to point them in short form.

But something must be wrong or Tom would sooner have been attended to, perhaps his life saved.

Something must be wrong when Tom could, through ignorance or otherwise, be allowed to transmit his malady to his wife and child.

Something must be wrong when sick Maggie has to toil day and night to keep her brood from starvation.

And Maggie takes in sewing.

T. E. O.

TWELFTH DISTRICT MEDICAL SOCIETY

Dr. E. T. Coleman, Graymont, has organized a society in the newly formed twelve district.

This information is correct to date of going to press, so far as we have been able to obtain it from the various secretaries. Officers or others are requested to notify us of any errors or required changes. For further information concerning any society address the secretary.

LIST OF NATIONAL MEDICAL SOCIETIES

SOCIETY	PRESIDENT	SECRETARY	NEXT ANNUAL MEETING
AMERICAN MEDICAL ASSOCIATION..... American	John B. Murphy, Chicago.....	Alexander R. Craig, 535 Dearborn ave., Chicago.....	Atlantic City, June 4-7, 1912.
Academy of Medicine.....	Alexander R. Craig, Chicago.....	Charles McIntire, Easton, Pa.....	Atlantic City, June, 1912.
Academy of Ophthalmal. and Oto-Laryng.....	George F. Suker, Chicago.....	Lee M. Francis, 575 Delaware ave., Buffalo.....	Niagara Falls, Aug. 20-22, 1912.
Association of Anatomists.....	Ross G. Harrison, New Haven, Conn.....	G. Carl Huber, Ann Arbor, Mich.....	December, 1912.
Association of Genito-Urinary Surgeons.....	Edward Martin, Philadelphia.....	J. Bentley Squier, 49 E. 49th st., New York.....	Philadelphia, June 7-8, 1912.
Association of Obstetricians and Gyn.....	Xavier O. Werder, Pittsburgh.....	E. G. Grinkle, Cincinnati.....	Toledo, September, 1912.
Assn. of Pathologists and Bacteriologists.....	R. M. Pearce, Philadelphia.....	H. C. Ernst, Harvard Med. School, Boston.....	Philadelphia, April 5-6, 1912.
Association of Railway Surgeons.....	Rhett Goode, Mobile, Ala.....	Louis J. Mitchell, 132 N. Wabash ave., Chicago.....	Chicago, Oct. 16-18, 1912.
Climatological Association.....	A. D. Blackader, Montreal.....	Guy Hinsdale, Hot Springs, Va.....	Hartford, Conn., June 10-12, 1912.
Dermatological Association.....	Grover W. Wende, Buffalo.....	James M. F. Winfield, 47 Halsey st., Brooklyn.....	St. Louis, May 23-25, 1912.
Electro-Therapeutic Association.....	William D. McFee, Haverhill, Mass.....	J. W. Travel, 27 E. 11th st., New York.....	Baltimore, September, 1912.
Gastro-Enterological Association.....	W. B. Cannon, Boston.....	F. W. White, 416 Marlborough st., Boston.....	Atlantic City, June 3-4, 1912.
Gynecological Society.....	Howard A. Kelly, Baltimore.....	LeRoy Brown, 148 W. 77th st., New York.....	Baltimore, May 23-30, 1912.
Laryngological Association.....	James E. Newcomb, New York.....	Harmon Smith, 44 W. 49th st., New York.....	Atlantic City, May 9-11, 1912.
Laryn., Rhin. and Otol. Society.....	G. Hudson Makuen, Philadelphia.....	Thos. J. Harris, 117 E. 40th st., New York.....	June, 1912.
Medico-Psychological Association.....	Hubert Work, Pueblo, Colo.....	Charles G. Wagner, Binghamton, N. Y.....	Atlantic City, N. J., May 28-31, 1912.
Neurological Association.....	William N. Bullard, Boston.....	Alfred R. Allen, 2013 Spruce st., Philadelphia.....	Boston, Mass., May 30-June 1.
Ophthalmological Society.....	Edward Jackson, Denver.....	W. M. Sweet, 1205 Spruce st., Philadelphia.....	Atlantic City, June 12-13, 1912.
Orthopedic Association.....	Virgil P. Gibney, New York City.....	R. R. Fitch, 209 East ave., Rochester, N. Y.....	Atlantic City, May 30-June 1.
Otological Society.....	Edw. B. Dench, New York.....	James F. McKernon, 62 W. 52d st., New York.....	Atlantic City, June 10-11.
Pediatric Society.....	Augustus Caille, New York.....	S. S. Adams, 1 Dupont Circle, Washington, D. C.....	Hot Springs, Va., May 29-31, 1912.
Physicians, Association of.....	J. George Adami, Montreal.....	G. M. Kober, 1819 Q st., Washington, D. C.....	Atlantic City, May 7-8, 1912.
Physiological Society.....	S. J. Meltzer, New York.....	A. J. Carlson, University of Chicago, Chicago.....	Cleveland, O., Dec. 26-28, 1912.
Proctologic Society.....	John L. Jelks, Memphis, Tenn.....	L. H. Adler, Jr., 1610 Arch st., Philadelphia.....	Atlantic City, June 4-5, 1912.
Public Health Association.....	John N. Hurty, Indianapolis, Ind.....	C. C. Woodward, 1766 Lanier pl., Washington, D. C.....	Washington, September, 1912.
Roentgen Ray Society.....	Frederick H. Baetjer, Baltimore, Md.....	Henry K. Pancoast, 4238 Pine st., Philadelphia.....	Niagara Falls, N. Y., Sept., 1912.
Society of Tropical Medicine.....	Jos. H. White, U. S. P. H. & M. H. S.....	John M. Swan, 457 Park ave., Rochester, N. Y.....	Atlantic City, June 3, 1912.
Surgical Association.....	Arpad G. Gerster, New York.....	Robt. G. LeConte, 1530 Locust st., Philadelphia.....	Montreal, May 29-31, 1912.
Therapeutic Society.....	Alex. D. Blackader, Montreal, Que.....	N. P. Barnes, 212 Maryland ave., Washington, D. C.....	Montreal, May 31-June 1, 1912.
Urological Association.....	L. E. Schmidt, Chicago.....	H. A. Fowler, Teh Cumberland, Washington, D. C.....	New York City, April 2-4, 1912.
Assn. of Military Surgeons of the U. S.....	C. P. Wertenbaker, U.S.P.H. & M.H.S.....	C. Lynch, 716 Union Trust Bldg., Washington, D. C.....	Baltimore, 1912.
Congress Am. Phys. and Surgs.....	Wm. C. Gorgas, Ancon, C. Z.....	W. R. Steiner, 4 Trinity st., Hartford, Conn.....	Washington, D. C., May, 1913.
Conference of State and Prov. Bds. of N.A.....	W. C. Woodward, Washington, D. C.....	H. M. Bracken, Capitol Bldg., St. Paul, Minn.....	Washington, D. C., Sept. 20-21, 1912.
Med. Association of the Southwest.....	A. L. Blesh, Oklahoma City, Okla.....	Fred H. Clark, El Reno, Oklahoma.....	Hot Springs, Ark., Oct. 8-10, 1912.
Mississippi Valley Medical Association.....	Louis Frank, Louisville, Ky.....	Henry E. Tuley, 111 W. Ky. st., Louisville, Ky.....	
Missouri Valley, Medical Society of the.....	John M. Bell, St. Joseph, Mo.....	Chas. Wood Fassett, St. Joseph, Mo.....	Colfax Springs, Ia., March 21-22, '12.
Nat. Assn. for Study and Prev. of Tuber.....	Mayck P. Ravenel, Madison, Wis.....	H. B. Jacobs, 11 Mt. Vernon pl., Baltimore.....	May, 1912.
Nat. Assn. for Study of Epilepsy.....	William T. Shanahan, Sonoma, N. Y.....	J. F. Munson, Sonoma, N. Y.....	Vineland, N. J., June 3, 1912.
Southern Medical Association.....	Jas. M. Jackson, Jr., Miami, Fla.....	Seale Harris, Mobile, Ala.....	Jacksonville, Fla., 1912.
Southern Surgical and Gyn. Association.....	J. M. T. Finney, Baltimore.....	W. D. Haggard, Jr., 148 8th Ave. N., Nashville.....	Old Point Comfort, Va., 1912.
Western Surgical and Gyn. Association.....	L. L. McArthur, Chicago.....	Arthur T. Mann, Donaldson Bldg., Minneapolis.....	Cincinnati, 1912.

LIST OF STATE MEDICAL SOCIETIES

This information is correct to date of going to press, so far as we have been able to obtain it from the various secretaries. Officers or others are requested to notify us of any errors or required changes. For further information concerning any society address the secretary.

SOCIETY	PRESIDENT	SECRETARY	NEXT ANNUAL MEETING
Alabama, Medical Assn. of the State of....	H. T. Inge, Mobile.	J. N. Baker, 602 So. Perry st., Montgomery....	Mobile, April 16, 1913.
Arizona Medical Association.	Francis E. Shine, Bisbee.	John W. Flinn, Prescott....	
Arkansas Medical Society.	Morgan Smith, Little Rock.	C. P. Meriwether, 309 S. Tr. Bldg., Little Rock	
Connecticut State Medical Society....	John G. Stanton, New London.	Walter R. Steiner, 4 Trinity st., Hartford	
California, Medical Soc. of the State of.	Thos. W. Huntington, San Francisco.	Philip M. Jones, Butler Bldg., San Francisco	Pueblo, September 24-26, 1912.
Colorado State Medical Society....	Walter A. Jayne, Denver.	Melville Jones, Metropolitan Bldg., Denver	Wilmington, Oct. 8, 1912.
Delaware State Medical Society....	Frank L. Springer, Newport.	G. W. K. Forrest, 901 Jackson st., Wilmington.	
Florida Medical Association.	Albert H. Freeman, Starke.	J. D. Fernandez, Jacksonville.	Savannah, April 16, 1913.
Georgia, Medical Association of.	W. W. Pilechet, Warrenton.	Wm. C. Lyle, Augusta.	
Medical Society of Hawaii.	Irwin J. Shepherd, Honolulu.	Edmund W. Weis, Ottawa.	
Illinois State Medical Society.	W. K. Newcomb, Champaign.	Chas. N. Combs, Terre Haute.	Indianapolis, Sept. 27-28, 1912.
Indiana State Medical Association.	William F. Howat, Hammond.	V. L. Treyner, Council Bluffs.	
Iowa State Medical Society....	L. W. Littig, Davenport.	E. E. Maxey, Boise.	
Idaho State Medical Association.	William F. Howard, Pocatello.	Chas. S. Huffman, Columbus.	
Kansas Medical Society.	John T. Axtell, Newton.	Arthur T. McCormack, Bowling Green	Louisville, Oct. 12, 1912.
Kentucky State Medical Association.	J. G. Carpenter, Stanford.	Joseph D. Martin, 141 Elk pl., New Orleans	Baton Rouge, 1913.
Louisiana State Medical Society.	B. A. Ledbetter, New Orleans.	Wilfrid Haughey, 24 W. Main st., Battle Creek	
Louisiana State Medical Society.	D. Emmett Welsh, Grand Rapids.	Thos. McDavitt, 210 Lowry Bldg., St. Paul.	Duluth, August 14-15, 1912.
Minnesota State Medical Society.	Halder Sneve, St. Paul.	E. F. Howard, First Nat. Bank Bldg., Vicksburg	Vicksburg, 1913.
Mississippi State Medical Association.	S. W. Glass, Dublin.	E. J. Godwin, 3525 Pine st., St. Louis.	
Missouri State Medical Association.	Robert H. Goodier, Stoutsville.	Herbert D. Kistler, Murray Hospital, Butte	
Montana State Medical Association.	T. C. Witherspoon, Butte.	W. Bean Moulton, 622 Congress st., Portland	
Maine Medical Association.	Stanley P. Warren, Portland.	John Ruhrah, 1211 Cathedral st., Baltimore	
Maryland, Medical and Chir. Faculty of.	A. C. Harrison, Baltimore.	Walter L. Burrage, 282 Newbury st., Boston	
Massachusetts Medical Society.	Geo. B. Shattuck, Boston.	D. E. Sullivan, 7 No. State st., Concord.	
New Hampshire Medical Society.	Geo. W. McGregor, Littleton.	Wisner R. Townsend, 17 West 43d st., New York	Rochester, 1913.
New York, Med. Soc. of the State of.	John F. W. Whitebeck, Rochester.	W. J. Chandler, 65 So. Orange ave., So. Orange	
New Jersey Medical Society of.	Daniel Strock, Camden.	Jos. M. Aikin, 466-468 Brandeis Block, Omaha	
Nebraska State Medical Association.	Andrew D. Nesbit, Tekamah.	J. S. Bentley, St. John, N. B.	
New Brunswick Medical Society.	C. T. Purdy, Moncton, N. B.	David A. Stanton, High Point	
North Carolina Med. Soc. of the State of.	Alfred A. Kent, Lenoir.	R. E. McBride, Las Cruces.	
New Mexico Medical Society.	Robert L. Bradley, Roswell.	H. J. Rowe, Casselton.	
North Dakota State Medical Association.	Clinton E. Spicer, Litchville.	J. H. J. Upham, 186 E. State st., Columbus.	
Ohio State Medical Association.	Horace Bonner, Dayton.	M. B. Marcelus, 901-3 Selling Bldg., Portland	
Oregon State Medical Association.	F. A. Sommer, Portland.	Claude A. Thompson, Muskegon.	Scranton, Sept. 23-26, 1912.
Oklahoma Medical Association.	Charles L. Reeder, Tulsa.	F. Arnold Clarkson, 471 College st., Toronto	
Ontario Medical Association.	Herbert E. Bruer, Toronto.	Cyrus Lee Stevens, Athens	
Pennsylvania, Med. Soc. of the State of.	James Tyson, Philadelphia.	S. A. Welch, 253 Washington st., Providence	
Rhode Island State Medical Society.	Fredrick T. Rogers, Providence.	R. D. Alway, 212 Main st., Aberdeen.	
South Dakota State Medical Association.	William G. Smith, Sidney.	Edgar A. Hines, Seneca.	Nashville, April 8-10, 1913.
South Carolina Medical Association.	Chas. M. Rees, Charleston.	Perry Bromberg, Nashville, 315 Jackson Bldg.	
Tennessee State Medical Association.	O. Dukaney, Dyersburg.	H. Taylor, W. National Bank Bldg., Fort Worth	Ogden, Oct. 1-2, 1912
Texas, State Medical Association of.	J. H. McCracken, Mineral Wells.	W. Brown Ewing, Salt Lake City	Montpelier, Oct. 10-11, 1912.
Utah State Medical Association.	Robert W. Fisher, Salt Lake City.	C. H. Brecher, Burlington.	Norfolk, Oct. 22-25, 1912.
Vermont State Medical Society.	F. T. Kidder, Woodstock.	Paulus A. Irving, Farmville.	
Virginia, Medical Society of.	Hugh M. Taylor, Richmond.	C. H. Thomson, Seattle	
Washington State Medical Association.	Leon L. Love, Tacoma.	Charles S. Sheldon, 251 Langdon st., Madison	
Wisconsin, State Medical Society of.	J. M. Dodd, Ashland.	A. P. Butt, Davis.	Sheridan, September, 1912.
West Virginia State Medical Association.	A. C. Henry, Fairmont.	W. H. Roberts, Sheridan.	
Wyoming State Medical Society....	A. C. Hamilton, Thermopolis.		

RATES FOR REPRINTS

100.....	\$1.00 per page
200.....	1.25 per page
500.....	1.50 per page
1000.....	2.00 per page

Covers to count as four pages when ordered.

The Journal is owned and published by the Association, and all profit goes to make it better. Each member of the Association is financially interested in the Journal to the same extent as every other member, and each member is rightfully anxious for the financial success of the publication.

The greater this financial success, the greater the practical value can be made to the individual member, and hence the greater the value as an advertising medium.

Our advertisers, by their patronage, help to support the Journal, and make its successful publication possible. In return they expect, and rightfully, a fair return for their money. Every dollar spent by a member of the Medical Association of Georgia with advertisers in our Journal, in preference to non-advertisers, is a dollar spent in advancing his own personal advantage, for he has contributed something indirectly to the betterment of his own property.

The Journal cannot exist without the advertisers and their good will.

The advertisers cannot continue in business without the patronage of the medical profession.

The medical man cannot continue in business without the supplies for sale by the Advertisers.

The interests of all are identical—the profession must depend upon the manufacturers, etc.—The manufacturers, drug houses, etc, must depend upon the more progressive and more successful physicians. The interests of both are best served through the official Medical Journal—the Journal published by the profession in its own best interests, scientifically and ethically.

ADVERTISING RATES

1	Page	1 year.....	\$150.00
$\frac{1}{2}$	"	1 "	87.50
$\frac{1}{4}$	"	1 "	50.00
$\frac{1}{8}$	"	1 "	33.00
$\frac{1}{16}$	"	1 "	25.00
1	Page	6 months.....	87.50
$\frac{1}{2}$	"	6 "	50.00
$\frac{1}{4}$	"	6 "	33.00
$\frac{1}{8}$	"	6 "	25.00
$\frac{1}{16}$	"	6 "	20.00
1	Page	3 Months.....	50.00
$\frac{1}{2}$	"	3 "	33.00
$\frac{1}{4}$	"	3 "	15.00
$\frac{1}{8}$	"	3 "	10.00
1	Page	1 month.....	25.00
$\frac{1}{2}$	"	1 "	15.00
$\frac{1}{4}$	"	1 "	10.00
$\frac{1}{8}$	"	1 "	7.50

These rates do not apply to cover pages, space next to reading matter, or matter requiring to be reset.

Hay Fever

Two agents upon which you
may confidently rely.

Undoubtedly the most effective method of treatment of vasomotor rhinitis (or hay fever) is by application of the suprarenal substance in the form of its isolated active principle, Adrenalin.



Adrenalin Chloride Solution and Adrenalin Inhalant, in which forms the suprarenal active principle are advantageously used, are powerful astringents. Topically applied, they constrict the capillaries, allay the congestion of the mucous membrane, reduce the swelling of the turbinal tissues, control the nasal discharge, and cut short the violent paroxysms of sneezing and the abundant lacrimation. Under their use the nasal obstruction disappears, together with the cough, headache and other reflex symptoms; natural breathing is resumed, and the condition of distress and unrest gives way to one of comfort.

Solution Adrenalin Chloride

Adrenalin Chloride, 1 part; physiological salt solution (with 0.5% Chlorotone), 1000 parts.

Dilute with four to five times its volume of physiological salt solution and spray into the nares and pharynx. Ounce glass-stoppered bottles.

Adrenalin Inhalant

Adrenalin Chloride, 1 part; an aromatized neutral oil base (with 3% Chlorotone), 1000 parts.

Dilute with three to four times its volume of olive oil and administer in the manner described above. Ounce glass-stoppered bottles.

◆ ◆ ◆
THE GLASEPTIC NEBULIZER.—This is an ideal instrument for spraying the solutions above mentioned. It is at once aseptic, convenient and efficient. It is easily sterilized, the working parts being one piece of glass. It produces a fine spray and is suited to oils of all densities, as well as aqueous, spirituous and ethereal liquids. Competent authorities pronounce it the most practical atomizer ever offered to the medical profession. Price, complete (with throat-piece), \$1.25.

Home Offices and Laboratories,
Detroit, Michigan.

Parke, Davis & Co.

The Journal of the Medical Association of Georgia



Published Monthly under Direction of the Council

Editorial and Business Office—300, 302 and 304 Harison Building.

Subscription Price, \$1.00

Entered as second-class matter, August 4, 1911, at the Post Office at Augusta, Ga., under the Act of March 3, 1879.

Vol. II AUGUSTA, GA., SEPTEMBER, 1912 No. 5

CONTENTS AND DIGEST.

ORIGINAL ARTICLES

On the Injurious Effects of Iodides and Bromides on Acute Inflammations, Especially Cystitis. By E. Bates Block, M.D., Atlanta.....	139
Salvarsan (606) in the Treatment of Syphilis. By Edgar G. Ballenger, M.D., and Omar F. Elder, M.D., Atlanta....	140
Additional Report on the Use of Salvarsan. By W. L. Champion, M.D., Atlanta.....	144
Discussion on Drs. Ballenger's and Champion's Papers.....	145
Chronic Ulceration of Trigone and Vesical Neck a Sequel of Specific Urethritis. By J. L. Farmer, M.D., Savannah.....	147
Two-Step Method of Enucleation of the Prostate. By A. L. Fowler, M.D., Atlanta.....	154
Discussion on Dr. Fowler's Paper.....	154
Kidney Symptoms and Diagnosis. By M. L. Boyd, M.D., Atlanta.....	155
The value of Ureteral Catheterization. By W. F. Shallenberger, M.D., Atlanta.....	160
Discussion on Dr. Shallenberger's Paper.....	165

EDITORIALS

Vote on Passage of Medical Practice Act, August 14, 1912.....	169
---	-----

TUBERCULOSIS

A Better Understanding Needed.....	170
Report of 150 Cases of Pulmonary Tuberculosis Treated with Tuberculin	171
Fresh Air and How to Use It.....	171

PEDIATRICS

A Pediatric Section in the Medical Association of Georgia or a Georgia Pediatric Society.....	172
---	-----

PELLAGRA

Blood Findings in Pellagra. By J. A. Johnston, M.D., Augusta	174
Meeting of National Association for the Study of Pellagra.....	174

GYNECOLOGY

Report of Case of Urethral Stricture in Hermaphrodite. By W. W. Battey, M.D., and Theo. C. Kershaw, M.D.....	175
Pituitrin in the Treatment of Uterine Hemorrhage.....	175

MISCELLANEOUS

The Effect of Certain Experiments upon the Islands of Langerhans	168
New Members Since Last Issue.....	173
Industrial Employment of Married Women, the Birth Rate, and the Sex Ratio at Birth.....	176

OFFICERS

President.....W. W. PILCHER, M.D., Warrenton
First Vice-Pres.....J. W. PALMER, M.D., Ailey
Second Vice-Pres.....T. H. HALL, M.D., Macon
Sec.-Treas.....W. C. LYLE, M.D., Augusta

COUNCILORS

First Dist.—J. Lawton Hiers, M.D.....Savannah
Second Dist.—Gordon Chason, M.D.....Bainbridge
Third Dist.—V. O. Harward, M.D.....Arabi
Fourth Dist.—C. L. Williams, M.D.....Columbus
Fifth Dist.—J. N. Ellis, M.D.....Atlanta
Sixth Dist.—J. A. Combs, M.D.....Locust Grove
Seventh Dist.—W. P. Harbin, M.D.....Rome
Eighth Dist.—I. H. Goss, M.D.....Athens
Ninth Dist.—W. B. Hardman, M.D.....Commerce
Tenth Dist.—W. J. Cranston, M.D.....Milledgeville
Eleventh Dist.—A. G. Little, M.D.....Valdosta
Twelfth Dist.—E. T. Coleman, M.D.....Graymont

VICE-COUNCILORS

First Dist.—A. J. Mooney, M.D.....Statesboro
Second Dist.—C. K. Sharpe, M.D.....Arlington
Third Dist.—A. G. Crittenden, M.D.....Shellman
Fourth Dist.—T. S. Bailey, M.D.....Newnan
Fifth Dist.—F. K. Boland, M.D.....Atlanta
Sixth Dist.—R. H. Stovall, M.D.....Macon
Seventh Dist.—J. H. Hammond, M.D.....LaFayette
Eighth Dist.—E. G. Adams, M.D.....Greensboro
Ninth Dist.—J. S. Tankersley, M.D.....Ellijay
Tenth Dist.—G. L. Carpenter, M.D.....Wrens
Eleventh Dist.—J. G. Tuten, M.D.....Jesup
Twelfth Dist.—M. L. Currie, M.D.....Vidalia

STANDING COMMITTEES

Scientific Work

E. E. Murphey, M.D., Chairman.....Augusta
V. H. Bassett, M.D.....Savannah
W. C. Lyle, M.D., ex-officio.....Augusta

Medical Defense

M. A. Clark, M.D., Chairman.....Macon
J. N. Ellis, M.D.....Atlanta
E. T. Coleman, M.D.....Graymont
J. G. Dean, M.D.....Dawson
E. G. Jones, M.D.....Atlanta

Organization

T. J. McArthur, M.D., Chairman.....Cordele
G. R. White, M.D.....Savannah
W. B. Hardman, M.D.....Commerce

Public Policy and Legislation

J. R. Littleton, M.D., Chairman.....Augusta
W. L. Champion, M.D.....Atlanta
C. C. Harrold, M.D.....Macon
President and Secretary, ex-officio

Necrology

V. D. Lockhart, M.D., Chairman.....Maysville
W. B. Emery, M.D.....Atlanta
S. S. Smith, M.D.....Athens
M. F. Carson, M.D.....Griffin
J. M. Hull, M.D.....Augusta

Arrangements

(Committee to be selected by the Chatham County Society)

Delegates to American Medical Association

W. H. Doughty, M.D.....Augusta
E. G. Ballenger, M.D. (alternate).....Atlanta
T. J. Charlton, M.D.....Savannah
T. R. Wright, M.D. (alternate).....Augusta

COLLABORATORS

History of Medicine

J. B. Baird, Sr., M.D.....Atlanta
L. G. Hardman, M.D.....Commerce
T. R. Wright, M.D.....Augusta

Medicine

W. W. Jarrell, M.D.....Thomasville
Ralston Lattimore, M.D.....Savannah
Thos. D. Coleman, M.D.....Augusta

Tuberculosis

C. H. Richardson, M.D.....Montezuma
J. H. Hammond, M.D.....LaFayette
T. E. Oertel, M.D.....Augusta

Pellagra

G. M. Niles, M.D.....Atlanta
E. M. Green, M.D.....Milledgeville
N. M. Moore, M.D.....Augusta

Nervous and Mental Diseases

L. M. Gaines, M.D.....Atlanta
E. T. Gibbes, M.D.....Gainesville
W. R. Houston, M.D.....Augusta

Pediatrics

W. Z. Holliday, M.D.....Atlanta
M. A. Clark, M.D.....Macon
W. A. Mulherin, M.D.....Augusta

Public Health

E. C. Benedict, M.D.....Athens
H. F. Harris, M.D.....Atlanta
E. E. Murphey, M.D.....Augusta

Surgery

W. F. Westmoreland, M.D.....Atlanta
R. P. Glenn, M.D.....Columbus
W. H. Doughty, Jr., M.D.....Augusta

Orthopedics

H. J. Williams, M.D.....Macon
Michael Hoke, M.D.....Atlanta
H. M. Michel, M.D.....Augusta

Genito-Urinary and Syphilis

J. L. Farmer, M.D.....Savannah
W. L. Champion, M.D.....Atlanta
H. W. Shaw, M.D.....Augusta

Obstetrics

H. McHatton, M.D.....Macon
R. L. Miller, M.D.....Waynesboro
A. J. Kilpatrick, M.D.....Augusta

Gynecology

E. G. Jones, M.D.....Atlanta
J. R. B. Branch, M.D.....Macon
W. W. Battey, Jr., M.D.....Augusta

Eye, Ear, Nose and Throat

F. P. Calhoun, M.D.....Atlanta
H. H. Martin, M.D.....Savannah
W. C. Lyle, M.D.....Augusta

Roentgenology

E. R. Corson, M.D.....Savannah
J. S. Derr, M.D.....Atlanta
C. W. Crane, M.D.....Augusta

Anaesthesias

T. J. Collier, M.D.....Atlanta
Chas. Usher, M.D.....Savannah
M. S. Levy, M.D.....Augusta

Laboratories

K. R. Collins, M.D.....Atlanta
V. H. Bassett, M.D.....Savannah
Everard Wilcox, M.D.....Augusta

DISTRICT SOCIETIES

DISTRICT	PRESIDENT	SECRETARY
First	E. T. Coleman.....Graymont	Chas. Usher.....Savannah
Second	Hugo Robinson.....Alhany	F. M. Martin.....Shellman
Third	C. A. Greer.....Oglethorpe	M. R. Smith.....Cordele
Fourth	H. J. Goodwin.....Rooptville	Homer Boatright.....Carrollton
Fifth	W. D. Travis.....Covington	W. S. Ansley.....Decatur
Sixth	W. J. Little.....Macon	I. H. Adams.....Macon
Seventh	A. B. Greene.....Cartersville	T. Lowry.....Euharlee
Eighth	T. J. Wills.....Washington	D. H. DuPree.....Athens
Ninth	V. D. Lockhart.....Maysville	A. D. White.....Gainesville
Tenth	J. R. Beall.....Blythe	G. A. Traylor.....Augusta
Eleventh	H. C. Wheelchel.....Douglas	T. J. Carswell.....Waycross
Twelfth	J. L. Weddington.....Duhlin	C. R. Riner.....Summit

COUNTY SOCIETIES

COUNTY	PRESIDENT	SECRETARY
Baldwin	J. W. Mohley.....Milledgeville	W. F. Tanner.....Milledgeville
Banks	V. D. Lockhart.....Maysville	J. D. Rice.....Homer
Bartow	A. T. Calhoun.....Cartersville	H. E. Felton.....Cartersville
Ben Hill	E. J. Dorminy.....Fitzgerald	L. S. Osborne.....Fitzgerald
Bibb	F. M. Cunningham.....Macon	W. D. Hereford.....Macon
Blne Ridge	J. S. Tankersley.....Ellijay	C. B. Crawford.....Blue Ridge
Brooks	S. S. Galuden.....Quitman	J. S. King.....Quitman
Bullock	D. E. McEachern.....Stateshoro	F. F. Floyd.....Stateshoro
Burke	C. H. Cox.....Waynesboro	J. M. Byne.....Waynesboro
Butts	B. F. Aiken.....Jenkins	W. H. Steele.....Jackson
Carroll	M. M. Hallum.....Carrollton	R. E. Foster.....Carrollton
Chatham	V. H. Bassett.....Savannah	A. J. Waring.....Savannah
Clarke	A. C. Holliday.....Athens	M. F. Matthews.....Athens
Cohh	W. M. Kemp.....Marietta	W. H. Perkinson.....Marietta
Coffee	C. W. Roberts.....Douglas	Quitman Holton.....Douglas
Colquitt	J. H. Green.....Hartsfield	J. E. Lanier.....Moultrie
Coweta	T. B. Davis.....Newnan	T. S. Bailey.....Newnan
Crisp	A. J. Wheelchel.....Cordele	T. E. Bradley.....Cordele
Decatur	N. L. Spengler.....Donalsonville	Gordon Chason.....Bainbridge
DeKalh	A. R. Watkins.....Chamhlee	W. S. Ansley.....Decatur
Dougherty	C. W. Walker.....Alhany	Hugo Robinson.....Alhany
Elhert	C. E. Earle.....Elherton	L. P. Eherhart.....Elherton
Emanuel	C. R. Riner.....Summit	R. C. Franklin.....Graymont
Floyd	W. W. Mangum.....Rome	W. L. Funkhouser.....Rome
Forsyth	J. H. Hockenhuil.....Cumming	J. H. Hockenhuil.....Cumming
Franklin	F. G. Moss.....Royston	B. T. Smith.....Carnesville
Fulton	L. B. Clarke.....Atlanta	R. R. Daly.....Atlanta
Gordon	W. B. Floyd.....Plainville	E. O. Shellhorse.....Calhoun
Greene	C. O. Copelan.....White Plains	E. G. Adams.....Greensboro
Hahersham	W. V. Chandler.....Baldwin	R. B. Lamh.....Demorest
Hall	A. D. White.....Gainesville	E. T. Gihhs.....Gainesville
Hancock	R. C. Wiley.....Sparta	J. A. Brown.....Sparta
Jackson	L. Landers.....Commerce	J. C. Bennett.....Jefferson
Jasper	F. S. Belcher.....Monticello	C. L. Ridley.....Hillsboro
Jefferson	J. W. Pilcher.....Stellaville	G. L. Carpenter.....Wrens
Jenkins	L. J. Belt.....Millen	W. E. Rushing.....Millen
Laurens	J. J. Baston.....Duhlin	W. C. Thompson.....Dublin
Lowndes	A. Griffin.....Valdosta	J. M. Smith.....Valdosta
Macon	C. H. Richardson.....Montezuma	C. A. Greer.....Oglethorpe
Madison	L. E. Roper.....Comer	J. L. Baker.....Carlton
Meriwether	E. B. Terrell.....Greenville	P. W. Fitts.....Greenville
Monroe	J. F. Lancaster.....Forsyth	J. O. Elrod.....Forsyth
Muscogee	J. M. Croke.....Columbus	G. S. Murray.....Columbus
McDuffie	Sterling Gibson.....Thomson	B. F. Riley.....Thomson
Newton	S. W. Everett.....Almon	O. L. Holmes.....Covington
Oconee	J. T. Elder.....Farmington	W. M. White.....Watkinsville
Ocmulgee	J. D. Herrman.....Eastman	J. C. Wall.....Eastman
Pike	R. A. Mallory.....Concord	M. M. Head.....Zebulon
Polk	C. V. Wood.....Cedartown	H. M. Hall.....Cedartown
Putnam	V. H. Taliaferro.....Eatonton	S. A. Clark.....Eatonton
Randolph	E. C. McCurdy.....Shellman	F. G. Barfield.....Cuthbert
Richmond	T. D. Coleman.....Augusta	W. C. Kellogg.....Augusta
Spalding	E. R. Anthony.....Griffin	J. M. Thomas.....Griffin
Stephens	Jeff Davis.....Toccoa	C. L. Ayers.....Toccoa
Stewart	R. L. Grier.....Lumpkin	M. Walton.....Lumpkin
Taliaferro	J. A. Rhodes.....Crawfordville	L. R. Brown.....Sharon
Terrell	J. T. Arnold.....Parrot	C. T. Kenyon.....Dawson
Thomas	W. W. Jarrell.....Thomasville	Harry Ainsworth.....Thomasville
Tift	W. H. Hendricks.....Tifton	L. A. Baker.....Tifton
Toomhs	J. M. Meadows.....Vidalia	T. C. Thompson.....Vidalia
Tri	H. L. Carroll.....Babcock	C. K. Sharp.....Arlington
Troup	F. M. Ridley, Jr.....LaGrange	John Banks.....LaGrange
Walker	J. M. Underwood.....Lafayette	J. H. Hammond.....Lafayette
Ware	J. C. Riopard.....Waycross	T. J. Carswell.....Waycross
Warren	R. D. Maner.....Warrenton	R. D. Nash.....Norwood
Wayne	J. G. Tuten.....Jesup	E. C. Crummey.....Jesup
Wilkes	A. W. Simpson.....Washington	O. S. Wood.....Washington
Worth	W. C. Tinton.....Sylvester	J. L. Tracy.....Sylvester

Journal of the Medical Association of Georgia

W. C. LYLE, M.D., Editor - Augusta, Georgia

ON THE INJURIOUS EFFECTS OF IODIDES AND BROMIDES ON ACUTE INFLAMMATIONS, ES- PECIALLY CYSTITIS*

E. Bates Block, M.D.

Professor of Nervous and Mental Diseases,
Atlanta College of Physicians and Surgeons

About eleven years ago I first noticed the injurious effects of iodides upon acute inflammations, and shortly after this I found that acute inflammations were made worse by bromides.

Every one is familiar with the acne produced by iodides and bromides and it is a very easy matter to demonstrate their injurious effects in any inflammatory condition. For many years I have carefully avoided giving them in any inflammatory condition accompanied by fever, or stop them if any rise of temperature takes place during their administration.

Their effects are best seen upon the bladder and in any case that has suffered from a previous cystitis, although quite quiescent at the time, they may bring on another attack of cystitis.

As examples of this I report the following cases:

(1) Mrs. X. had had an attack of cystitis some years before I saw her. Her urine was clear at the time, contained albumin and casts, but only an occasional pus cell. She had a moderate degree of arterio-sclerosis and was given potassium iodide, which soon produced an attack of cystitis. Some months after this was quite well, she was given syr. of hydriodic acid and again had cystitis. She was very nervous and on several occasions during the next five years she was given bromides and each time had an attack of cystitis. On May 22d she was given Salol, Gr. X with Bromural, Gr. V. On May 23d the urine showed 7 pus cells to the Thoma Zeiss blood-counting square. On May 30th there were 597 pus cells to the square. The day before this she had begun to complain of irritation of the bladder, fre-

quent urination, and said the urine was cloudy, so that the inflammation was well established one week after the beginning of the bromural. On May 30th the bromural and salol were stopped and she was given Lithium Carbonate, Gr. V, q.4.h.

On June 1st there were 332 pus cells and the reaction of the urine was alkaline, so the Lithium Carbonate was stopped on June 3d. On June 5th there were 300 pus cells; on June 6th she started taking uriform. On June 12th there were 151 pus cells, on June 14th, 38 pus cells, on June 19th, 72 pus cells, and as the uriform was beginning to irritate, she was again given Lithium Carbonate on June 20th. On June 24th there were 14 pus cells, on June 29th, 65 pus cells. On July 4th there were 5 pus cells. Lithium Carbonate was then stopped and cystogen was given. On July 11th there were 8 pus cells. On July 19th there were 4 pus cells and after this the urine remained clear and there were no further symptoms complained of.

(Case 2) Miss Z. had inflammation of the bladder three years ago. She was extremely nervous. The urine on June 20th showed 8 pus cells to the Thoma Zeiss blood-counting field. She was given uriform every four hours. On June 27th uriform was stopped and ammonium bromide, Gr. X was given three times daily. On July 3d there were 60 pus cells, on July 6th, 26 pus cells, on July 7th bromide was stopped and uriform was given again. On July 14th there were 13 pus cells, on July 22d 6 pus cells. Uriform was discontinued on July 22d and urotropine, Gr. V given t.i.d. At the patient's request, after explanation of the probable results, sodium bromide, Gr. X was given three times a day, beginning on July 24th. On July 26th there were 4 pus cells. On July 28th 14 pus cells. Sodium bromide was stopped on August 9th. On August 11th there were 53 pus cells.

It will be noticed that urotropine was begun two days before the bromide, and continued while taking it, and after it was discontinued.

In regard to the method of counting of the cells, the first specimen passed in the morning was taken, the bottle was well

* Read at meeting of Medical Association of Georgia, Augusta, Ga., April, 1912.

shaken up and a drop of urine was placed on the ordinary Thoma Zeiss blood-counting slide and the whole cross-ruled area counted just as in counting the blood.

While I have reported here only two cases I have seen the same results so frequently that I was quite convinced of the relation existing between recurrence of cystitis and bromides without any numerical demonstration. I have seen cases of pleurisy, tuberculosis, pus kidneys, and many other acute inflammations made worse by iodides and bromides.

SALVARSAN (606) IN THE TREATMENT OF SYPHILIS*

Edgar G. Ballenger, M.D., Atlanta
and
Omar F. Elder, M.D., Atlanta

Last year at the Rome meeting of the Medical Association of Georgia, I presented a preliminary report on the use of salvarsan. Since that time many facts have been added to our knowledge concerning the value of this remedy and its proper mode of administration. We are now in position to make a further report and speak with more certainty regarding the then doubtful points.

Our experience after giving 571 injections of salvarsan has convinced us that, if properly administered and repeated, this is our most potent remedy in combatting syphilis. We are equally certain that the intravenous injection is so far superior to the other methods that they may be considered relics of the past and only justifiable in infants or patients suffering with grave heart lesions. We no longer fear optic atrophy as a bi-effect of salvarsan, as none has resulted in our experience and in nearly all of the cases recorded in the literature there is a history of some other arsenic preparation having been given before the "606" was administered. Previous to the discovery of salvarsan, investigators treating sleeping sickness in Africa with atoxal, arseno-phenylglycin and other arsenic preparations, found that optic atrophy often followed where one remedy was administered in efficient doses and later substituted by another form of arsenic. The point of importance here then is to start the patient upon an arsenic

preparation and to stick to it, not changing from one to another. We have given "606" to eight patients who already had optic neuritis or atrophy, but saw no marked improvement except in one. The remedy was administered not for the neuritis, but rather in spite of it, for other syphilitic manifestations. None was made worse by it. One patient developed a syphilitic optic neuritis in spite of two intravenous injections of "606". Being the only instance in which we have seen anything which simulated a neurorecurrence we desire to report in detail the facts concerning it. This neuritis, perhaps, could have been prevented had salvarsan been given in larger doses or repeated earlier. The first injection of "606" was given 20 days after Dr. Phinizy Calhoun had observed a "suggestion of a slightly hazy right nerve." His later report is as follows:

"At your request I am enclosing report of my eye examination of our patient 'J. W. H.'"

"On September 21, 1911, I first examined her on account of some headaches. The right eye was practically normal, the left very astigmatic and there existed a condition known as amblyopia ex anopsia. I, however, prescribed a glass for her to read in. At that time I made a notation on my record as follows: 'Suggestion of a slightly hazy right nerve.' I did not see her again until December 26, 1911, after she had consulted you and I did not know anything of her former history. Her vision then in the right eye was 20-200 and the picture of the fundus very much swollen. Optic nerve, and veins most tortuous with marked exudation in the vitreous, over the region of the nerve head. I was in communication with you at that time and we decided upon another treatment of salvarsan. Her vision improved up to 20-40 minus, on February 5, 1912. I then lost sight of her for several days and she stopped all medication, which consisted of K. I. and inunctions.

"February 19th she returned with great pain in right eye and headaches, and vision was 20-70, veins were swollen and tortuous, the exudations more marked. On February 27th vision was reduced to hand movements only a few feet in front of her eye. I then put her to bed in a dark room and I am now giving her very large doses of K. I., hot packs and inunctions.

* Read at meeting of Medical Association of Georgia, Augusta, Ga., April, 1912.

"On March the 5th the vision had improved some and the veins and exudations did not appear to be so markedly swollen.

"I will be glad to let you know of any further complications.

"(Signed)

" F. PHINIZY CALHOUN, M.D."

Weigmann recently made a complete synopsis of the literature on salvarsan in the treatment of syphilitic diseases of the eye and reached the conclusion that this remedy has undoubtedly a favorable action on such conditions and is indicated rather than contra-indicated in luetic eye affections. Other observers have reached the same conclusions regarding ear affections. The neurorecurrences which have followed injections of salvarsan, especially in Vienna, appear to have arisen from an inadequate application of "606". They have nearly always occurred during the early secondary period of syphilis and especially when the skin eruption was slight. Therefore more of salvarsan should be administered to the patients who are treated during this acute secondary period. We have seen no ear affections follow administrations of "606" either due to the remedy or the disease.

As to the adequacy of salvarsan we can truthfully say that we are more enthusiastic now than we were when we began its use, for then we were apprehensive lest there might be more recurrences of the disease than we have seen or that the remedy itself might cause unforeseen disturbances. In both our fears we have been agreeably surprised. While we have seen more syphilitic patients during the past seventeen months than at any other time, those who have been treated with "606" have been altogether much healthier than our similar patients have ever been before. They have almost invariably made a gain in weight and have had a feeling of well-being rarely observed in syphilitic patients before the advent of salvarsan. Formerly patients taking the mercury and iodid treatment would not infrequently report with mucous patches on the lips, tongue or buccal cavity or some undoubtedly syphilitic affection. Such recurrences have been strikingly absent in the patients treated with "606", except in a few early instances where the doses were too small and not properly repeated.

One has but to compare the health of the salvarsan patients, with the gastro-in-

testinal and other disturbances and recurrences of those taking the mercury and iodid treatment to see the superiority of "606". The patients who have had both treatments almost invariably express a preference for "606". Mercury may be given if deemed necessary to supplement or clinch the good effect of the "606" or vice versa. When so administered mercury need not be given in sufficient quantity to exhibit its harmful effect, as the major part of the cure is produced with "606" and only the "finishing touches" need be made with mercury. We have administered mercury to only about five per cent. of our patients, as we found "606" to be more sufficient and less disturbing. If the cure can be effected with repeated doses of salvarsan it would appear advantageous to depend upon this remedy except where it is found to be inadequate. To give mercury as a routine with "606" tends to make the results from "606" seem better than they really may be. We may thus mask symptoms that would otherwise demand more active and more thorough treatment than temporizing doses of mercury, i. e., repeated and adequate doses of salvarsan. If the patient is not cured with salvarsan we want to know about it at the earliest possible time. If we anticipate a recurrence another injection should be given or a blood test made, the report being as a temporary guide. A review of the literature shows that the best results have followed where the patients have received two, three or more intravenous injections of salvarsan from syphilologists who were skillful in recognizing the various luetic manifestations and who utilized the Wassermann test, for what it is worth, in deciding upon the repetition of the injections. It is a remedy to be used boldly but not recklessly. Careful examinations and full knowledge of the patient's physical defects become absolute necessities in order to determine the proper dose for a given patient. Next in importance comes its proper administration. The danger of salvarsan, properly administered, is nothing like so great as is the danger of uncured or inadequately treated syphilis; not to us does it seem as harmful as mercury. In a former communication we made the following statement, which, with further experience, we believe to be true:

"If the patients who received "606" had been selected by syphilographers, to

be sure of the diagnosis; if the physical examinations, to determine their fitness, had been made by physicians accustomed to making such examinations; if the remedy had been prepared by exact chemists; and if the administration had been done by persons with a perfect surgical cleanliness and if surgeons, expert in blood vessel work, had administered intravenous injections, repeated them one month later, and again if the incurred disease or a positive blood test showed them to be indicated—if all of these ifs had been observed by all of the administrators of "606" it would have received nothing but praise for its wonderful action and for its harmlessness. We must remember that "606" has been passing through the experimental stage, during which much information has been gained. Many patients have also been treated by men entirely unfamiliar with its exact preparation and mode of administration. Even during these circumstances, with far too much of it given subcutaneously and intramuscularly, very few ill effects have been recorded compared to what might have been expected. These facts prove most conclusively that properly administered it cannot be considered a dangerous remedy."

We have seen no patient who appeared to be harmed by it. One patient came for an injection on a Saturday afternoon when we were too busy to administer it and, as he said he had a slight cold, we advised that he wait until the first of the following week. Monday we heard he had pneumonia and Friday that he was dead. Another similar case was seen, the patient came from an adjoining state, but as there was doubt as to the diagnosis he was detained for a Wassermann test. During this time he contracted grippe. The blood test was negative so he was not treated. He went home and in ten days was dead. Had treatments been given to these patients no amount of reasoning could have convinced us that "606" had not been a chief factor in causing the death in both cases. Still another patient came to us after severe inflammation of the pharynx larynx and tonsils for forty days. There was a previous history of syphilis. The respiration difficulty was so that the patient could not breathe when reclining. He was steadily growing worse in spite of the services of many physi-

cians and throat specialists. Three-tenths of a gramme of salvarsan was given as a last resort. The next day he came to a throat specialist, who found his throat no better. The second day later he died of strangulation, the inflammation and swelling having blocked his throat. The blood taken the day "606" was given and reported upon later gave a negative test. The patient's kidneys and heart were normal. The "606" seemed to have no more to do with his death than did all of the previous unsuccessful medication.

There are many phases of the subject which we would like to discuss in detail if the limited time and imposition upon your patience did not forbid.

Without going into any of the various kinds of syphilitic affections treated, we will say that active luetic manifestations have responded wonderfully well, that we have no patient who does not seem cured, except those recently treated. This statement does not include parasymphilitic affections, destructive nerve lesions, nor chronic interstitial keratitis. While the last named disease responds to treatment it is quite slow compared to other more active manifestations of syphilis.

Believing that the technique is a matter of greatest importance the remainder of the paper will be devoted to this subject.

To begin with, everything connected with the preparation of "606" and its introduction should be done with the strictest surgical cleanliness. It has been clearly demonstrated by Wechsehmann, McIntosh, Fildes and others that the water used should be freshly distilled or redistilled in order to prevent the chill, nausea, vomiting, diarrhoea, and other disturbing symptoms which usually followed the intravenous injections of "606" when stale distilled water was used. Yakimoff has shown that salvarsan injected into animals along with various dead bacteria (usually found in stale distilled water) is more toxic than salvarsan alone. By this and further confirmatory evidence from tests on human beings is demonstrated the importance of using freshly distilled or redistilled water in the preparation of salvarsan or neo-salvarsan. This last named remedy might be called "perfected salvarsan." It is a neutral preparation discovered by Prof. Ehrlich and his co-workers, which does not require the caustic soda to bring it into

solution and is dissolved in plain sterile distilled water, not physiologic salt solution, as with salvarsan. Shreiber, who has had considerable experience with it, has shown that neo-salvarsan is better than salvarsan in that it is less disturbing, not causing vomiting, chill, diarrhoea, etc.; the dose is about one-half larger and therefore more effective; it needs only to be dissolved in the water and administered as salvarsan.

Exactly as with old salvarsan, acute affections rich in spirochaetes may develop a light fever after the first treatment, which disappears after further injections. Shreiber has used it since last October and has observed no neurorecurrences in any of the 269 patients treated with it. He is very enthusiastic in his praise of its potency and harmlessness. Through the courtesy of Prof. Ehrlich we have received a supply of neo-salvarsan of which we have given, so far, 18 injections. Our experience substantiates the claims made for it. On account of the misuse to which "606" was subjected, it is said that Prof. Ehrlich does not intend to market neo-salvarsan until its reputation has been made. When in solution neo-salvarsan has the same color and odor that salvarsan has, but is given in only about one-half the quantity of water, making the volume of the solution given much less. After the preparation of the solution both salvarsan and neo-salvarsan are given in the same manner. We have administered 415 consecutive injections without a single incision over the vein. Recently we improved our method of entering the vein in that we push a small hole, with a stiletto, into the skin over the vein and insert the needle through this little window into the vein. The arm is sterilized in region of the elbow and sterile towels cover the parts above and below, with the patient reclining on an operating table, a tourniquet is then adjusted so as to distend the veins, a large one is selected and the skin over it is injected with a small amount of a two per cent. solution of cocaine, care being taken not to puncture the vein. The skin is then pulled aside and the point of the stiletto pushed through it, making an opening about twice as large as the diameter of the needle to be used. Not a drop of blood will, as a rule, come from this small "window".

The needle may then be inserted through the opening into the vein. The slight pressure necessary to carry the needle through the anterior wall of the vein, when the skin resistance is thus eliminated enables one to gauge more accurately the insertion of the needle. After the operation is completed a bit of collodion seals the point and no tell-tale scar remains; furthermore a good vein is left intact for subsequent injections.

The solution of salvarsan or neo-salvarsan should never be allowed to enter until a previous test with normal salt solution has shown the needle to be accurately adjusted in the vein and that the inward flow does not cause swelling or pain at the site of the injection. If the solution be placed about three feet above the patient's arm it will flow in by gravity through an 18-gauge needle in about five minutes. The smaller amount of the solution used in giving neo-salvarsan will, of course, enter in less time. The patient should drink freely of lithia water for six hours before the treatment and for two weeks after, to dilute the urine and remedy contained in it so as to eliminate irritation of the kidneys.

We believe a matter of the utmost importance is the after-treatment of indurated lesions. Regardless of the potency of the solution injected into the blood unless it comes freely through diseased foci, we could not expect the best results. Many writers have commented upon the slow absorption of indurated chancre, enlarged glands, and other hard lesions. This we found to be true in our earlier cases. Since, however, we have provided better circulation through these indurated regions by the applications of hot water or hot fomentations during the first three or four days after the injections, we have observed a most satisfactory return of the tissues to normal. If the chancre is on the penis it should be soaked in a pitcher or bottle of hot water two or four hours at a time, two or three times daily for the first three days after the injection. The hyperemia thus produced renders available more of the remedy at the point where it most is needed. If the hardness is fibrous in character in a long-standing healed chancre, the response will be slow, even with heat applied.

Atlanta National Bank Building.

ADDITIONAL REPORT ON THE USE OF SALVARSAN*

W. L. Champion, M.D., Atlanta

Genito-Urinary Surgeon, Wesley Memorial and Georgian Hospitals

At the last meeting of this Association I presented a paper on the use of salvarsan covering a period of three months. The majority of cases reported at that time were given intramuscular injections. While the results were brilliant there were some failures. In those cases where the desired results were not obtained, the solution injected was not properly absorbed. Where there is an indurated mass that remains for several weeks after the injection, the preparation is still in the tissues and the patient does not get the full benefit of the injection. On account of the few failures, the pain and soreness produced, I have abandoned the intramuscular injection and only use the intravenous method. That the preparation when made into a solution and injected into a muscle or used subcutaneously is a powerful irritant there can be no doubt, and the fact that the alkaline solution used intravenously is also an irritant cannot be questioned, when we note the redness, pain and swelling produced when there is an escape of the solution into the cellular tissue.

It has been a question in my mind as to whether there was any damage done to the blood vessels by throwing such an irritant directly into them. I have not noticed any inflammatory condition along the course of a vein where the solution has passed, but it seems to me it is highly probable that there might be some pathological change produced by such a large quantity of an irritating solution thrown directly into the circulation. Whether months or years later we will find hardening of the vessels, time will only tell. I have watched with interest the patients in which the preparation has been used to detect any damage that might be done to the nervous system; so far I have found nothing barring the statement made by a few patients that they were very nervous for two weeks after an intravenous injection and suffered from insomnia.

I make it a rule to watch the patient closely while administering an intravenous

injection, always keeping my finger on the pulse. I have noticed an increase in the pulse rate when the fluid flows in rapidly, but cut off the flow or lower the container and the pulse will return to normal. In over three hundred injections administered in the office there has been no serious ill effects from salvarsan.

I do not consider it necessary to have the eyes examined before administering the preparation, and do not hesitate to use it in a syphilitic with chronic nephritis.

If salvarsan has been used as generously in other countries as it has in the United States during the past twelve months, there are fewer live spirochetes in the world today than there has been at any time since the building of King Solomon's Temple.

It is refreshing at this time to have your syphilitic patients come into the office to report their condition, and invariably find them free of mucous patches and skin lesions. This was not the case when we had to rely on the old methods of treatment.

While we must not get too enthusiastic over salvarsan until all is said and done and the final results are summed up, yet, I am satisfied we have in the preparation a blessing for those infected with syphilis. That the syphilitic that is being treated with the drug is less dangerous to society there can be no doubt, because, as stated, the most noticeable effect of salvarsan is the absence of mucous patches in those treated with it. The infection, as a rule, is conveyed to another from a mucous surface, and the value of the preparation cannot be estimated.

Before we knew anything of the Wassermann test or found the spirochete, we were taught to wait for the general manifestations of the disease before beginning constitutional treatment. This may have been the wise method to pursue or proper advice to give a beginner in the practice of medicine, but it is not the best course to pursue for the patient. The six weeks that elapses from the appearance of the initial lesion to the macular eruption has placed the patient in an unenviable position. There is increased glandular involvement, an increased number of spirochetes, and a decided impression made by the disease on the nervous system. These symptoms are prevented, or in a marked degree lessened, by earlier treatment.

* Read at meeting of Medical Association of Georgia, Augusta, Ga., April, 1912.

Some of the standard text books teach, and it was our custom to state to a patient, that nothing was lost by waiting for secondary evidences of the disease so as to be sure of our diagnosis. I hold that anyone who makes daily examinations of syphilitics with chaneres, glandular enlargements, mucous patches, skin lesions and various nervous manifestations of the disease will be equipped to diagnose syphilis, where there is such clinical evidence; just as easily as we diagnose pneumonia by physical examination and inspection.

Before the Wassermann test was known or the spirochete discovered, I have placed patients on anti-syphilitic treatment before the eruption appeared, and it was invariably the rule that those patients would have less trouble and were cured sooner than those who had a more marked infection. I believe anyone who has made a study of venereal diseases can retract a foreskin with a hard indurated sore, that feels like a coin under the membrane, "flop" over like a turtle that is turned on its back, and know he has a case of syphilis to deal with. I make this statement, not to discredit the Wassermann test or the necessity of the microscopic examination, as I insist since we are in possession of these means of diagnosis they should be utilized, but to impress the fact that the earlier the treatment is commenced in a syphilitic the better his chances are to get rid of the disease, whether the patient is treated with mercury or salvarsan. Before we were equipped as we are now for the diagnosis of syphilis, it was my rule to place a patient on anti-syphilitic treatment before seeing secondary manifestations of the disease, if the patient had a sore that would likely destroy important structures, such as chanere would necessarily do in the meatus, urethra or about the mouth or faec.

With our present equipment, a diagnosis can be positively made and should be done before commencing anti-syphilitic treatment. I am firmly convinced that the best results will be obtained from the use of salvarsan by administering it intravenously just as early as a diagnosis can be made and the full dose as advised at present given.

It is a noticeable fact that the greater the infection in a patient the more marked the reaction when given a dose of salvar-

san. An ordinary dose given to a person free of the disease has no more effect than the same quantity of saline solution. It is my rule to give a patient several doses of the preparation at intervals of three or four weeks before making the Wassermann test, as I do not think it advisable to leave off all treatment, especially in patients recently infected, for the required length of time to make the test of value.

Of the 205 cases in this report 199 were Gentiles and 6 were Hebrews; 192 males and 13 females; 10 were physicians, 5 of whom had the initial lesion on finger; 4 patients had chanere on the lip; 1 patient had chanere on the thigh; 1 patient had chanere on the abdomen; 5 cases were congenital; 7 patients had chanere in the meatus.

In conclusion let us emphasize the importance of impressing upon every patient that is given a dose of salvarsan that it is not a one-dose cure for syphilis; that the dose should be repeated if the Wassermann is positive; that this test is absolutely essential to know if there is a cure, and not to be deceived in the belief of a cure on account of the absence of symptoms. It is just as important that the patient should be under the watchful care of a physician for two or three years, use every means to improve his general condition, and abstain from alcohol and tobacco, as it was before we began the use of salvarsan.

It is almost a daily occurrence for individuals to come into the office and ask what I charge for giving a dose of "606"; I promptly answer the question by stating that if they have syphilis and desire my services I will gladly treat them, but I am not in the business to give single shot doses of "606."

313 and 314 Grant Building.

DISCUSSION ON DRS. BALLENGER'S AND CHAMPION'S PAPERS

Dr. C. C. Harrold, Macon, referred to the irritating effect of these injections upon the blood vessels, and said that the addition of too much alkali would produce it. Most men administering these injections of salvarsan were very careful at first and then they became more or less reckless and trouble ensued of course.

Dr. W. J. Cranston, Milledgeville, said that Dr. Ballenger had referred to the re-

action as being somewhat of diagnostic and prognostic importance. He stated that he was giving salvarsan systematically to all colored females, being admitted to the Georgia State Sanitarium, afflicted with pellagra, and to all colored females developing pellagra in the Sanitarium. He found that almost invariably he got a reaction in from one to twenty-four hours after the administration of the drug. In some instances he had not gotten this reaction, but in the majority he had and had attributed his failure to do so to the debilitated condition of the patients. Two instances in particular he recalled; one of the patients was moribund when admitted, and died four or five days after the administration of the drug; the other was still alive, but in very feeble condition and could not possibly live much longer. Very probably failure to react in these two instances was due to the lowered vitality of the patients. Dr. Cranston did not think they could attribute the reaction to lues, unless they were willing to accept the statement that was sometimes made that there was some direct connection between lues and pellagra. He further pointed out that the reaction obtained in his cases was not due to old stock solutions; that every injection was given under strict aseptic conditions, and the solutions were prepared immediately before administration, the saline solution always being prepared from freshly sterilized water.

Dr. E. G. Ballenger, Atlanta, said that no one need give up mercury; he did not see why they should give it up. He did see, however, why we should be enthusiastic over the use of salvarsan in the treatment of these cases. He knew that he was doing good with this agent and was curing patients who were afflicted with this disease. He could not claim that all his cases were absolutely well; time alone can tell. It will take longer than one generation to tell whether a patient is cured of this disease or not. In some patients a definite and distinct reaction may follow the injection of a stale normal salt solution. In the use of salvarsan he insisted upon having freshly distilled water.

Ehrlich and his co-workers have brought out neo-salvarsan, a neutral preparation and which was dissolved in one-half the quantity of water used for salvarsan. It was free from systemic reac-

tion; there was no nausea, no vomiting, but there was occasionally a slight diarrhoea produced, as well as a slight fever probably due to the destruction of a large number of organisms. The dose could be frequently repeated. Ehrlich recommended the giving of from three to four doses and this treatment should be repeated at stated intervals. Dr. Ballenger had been supplied with this remedy and after giving sixty-eight (68) injections he found that none of the patients showed any disagreeable reactions. He had seen the rash clear up in from thirty-six (36) to forty-eight (48) hours. It appeared to be more potent than "606" and one-half larger dose can be given with less disturbance to the patient. Dr. Ballenger did not want the impression to go out that he was giving up the use of mercury, if needed, and neither did he want them to feel that he was too enthusiastic over its use, though the results compel enthusiasm. Today he has hundreds of patients he had treated, who are in good condition, many of them having been so from ten to fifteen months. He has never before had such a happy, healthy group of syphilitic patients as he has had since he began to use "606."

Dr. W. L. Champion, Atlanta, said that before commencing the treatment one should make sure and be positive that the patient really had syphilis. Until one discovered the germ that caused the disease, or had gotten a positive Wassermann reaction, one should never place these patients on treatment; be first absolutely sure that they have the disease before instituting this form of treatment. The diagnosis as a rule could easily be made.

With regard to what Dr. Harrold had stated about the irritating effects upon the walls of the blood vessels, he asked him if he referred to a phlebitis or to merely a spasm of the vessels.

Dr. C. C. Harrold replied that he was referring to those red streaks; they appeared in one case in the arm, in the other in the leg. There was a general irritation but without any phlebitis.

Dr. W. L. Champion, Atlanta, said that the patients he had treated, without exception, received the protoiodide of mercury after each meal. He was better satisfied with the use of this agent, for he did not believe one should rely upon the use of any

new agent until it had been used for a long period of time and its effects carefully noted.

CHRONIC ULCERATION OF TRIGONE AND VESICAL NECK A SEQUEL OF SPECIFIC URETHRITIS*

J. L. Farmer, M.D., Savannah

This title will be discussed under the following heads:

- 1 Ulceration probably established with infection of prostatic urethra, seminal vesicles and prostate gland, and does not heal spontaneously with subsidence of acute inflammatory stage.
- 2 Usual treatment of dilatation, massaging and irrigating does not heal ulceration.
- 3 Little literature on subject.
- 4 Attention directed to this pathological condition by failure to relieve patient of frequent urination after several months' treatment.
- 5 Have found ulceration as early as ten months and as late as thirty years after gonorrheal infection.
- 6 Often deep ulceration of anterior neck does not cause frequent urination.
- 7 Ulceration or inflammation at internal mouth and anterior of trigone always accompanied by more or less frequent urination.
- 8 Prostate often blamed for patient rising at night when ulceration is true cause.
- 9 Percentage of ulceration in chronic gonorrheal prostatitis and vesiculitis large.
- 10 Women not exempt from ulceration.
- 11 Simple ulceration caused by pressure from other organs or growths do not heal spontaneously after pressure is removed.
- 12 Endoscope or cystoscope with direct application of silver nitrate best mode of treatment.

There is no question of fact that chronic ulceration of the trigone and vesical neck is a sequel of acute specific urethritis in a large number of these cases.

Establishment of the discharge in acute anterior urethritis, the mode of backward passage of the gonococcus to the posterior

urethra, through continuity of tissue in "the deeper layers of the apithelium, aided by strong injections, irrigations, bodily activity, indulgence in coitus, excesses in drinking and neglect of treatment" is generally well understood.

When the posterior urethra is invaded by the gonococcus and acute posterior urethritis is set up, the infection may extend to the ejaculatory ducts, prostate glands, seminal vesicles, vas deferens and epididymis. The ulceration caused by the infection and acute inflammation may remain superficial and heal without direct treatment, but in a large percentage of cases does not heal spontaneously with subsidence of the acute inflammation and passes on to chronic ulceration of the vesical neck and trigone.

As to subsidence and chronicity, White & Martin say: "In the majority of cases, posterior urethritis remains superficial and subsides without direct treatment. More frequently than is generally realized it becomes chronic, causing intermittent gleet and sexual neuroses of all types."

The number of invasions of the posterior urethra by gonococci from specific anterior urethritis is estimated by different investigators to range from 60% to 90% of all cases, and probably varying with efficiency of treatment.

That a chronic ulceration of the neck of the bladder does not heal from dilatation, massaging the prostates, stripping the seminal vesicles and irrigating is proven by finding, on examination with the endoscope, ulceration still present after months of regular and persistent treatment.

This paper is intended to discuss essentially chronic gonorrheal ulceration of the neck of the bladder, and reference is made to the acute stage merely to show the percentage of cases in which the gonococci are transmitted from the anterior to the posterior urethra. Therefore, the number of cases of chronic ulceration of the vesical neck and trigone, we may expect later to encounter in connection with the other chronic sequelae of gonorrhea, prostatitis, vesiculitis, urethritis and stricture.

In support of the correctness of this pathological change in the bladder neck, I quote from White & Martin's chapter on "Chronic Posterior Urethritis:" "This infiltration commonly superficial, though in cases of long standing it extends more deeply, involving the prostatic glands, the

* Read at meeting of Medical Association of Georgia, Augusta, Ga., April, 1912.

sinus peculiaris and the ejaculatory ducts producing the stage of contraction, destruction of the lacunae and superficial glands and, at times, obliteration of the opening of the prostatic sinus and of the ejaculatory ducts."

I have been able to find but little literature on this subject, except that White and Martin give a good expose of the pathological changes in the neck of the bladder under "Chronic Posterior Urethritis." Edward L. Keyes, Jr., in a recent issue of his book "Diseases of the Genito-Urinary Organs," says: "Chronic posterior urethritis is clinically synonymous with chronic follicular prostatitis," and dismisses the subject as follows: "Hence, it is preferable to consider chronic posterior urethritis under the title of Chronic Prostatitis."

My attention was directed suddenly to chronic ulceration of the vesical neck in May, 1911, by having a patient state, after an eight months' treatment, that he was no better than when treatment was begun. I, of course, was somewhat shocked, as I was considering at that time the advisability of dismissing him as cured. He was a model patient, did not touch alcoholics, prompt to meet engagements and equally prompt in settling his monthly bills. A history of the case affords the best explanation.

About middle of September, 1910, patient came to consult me in reference to too frequent urination, especially at night, having to rise and empty the bladder from four to six times each night. He was a bachelor, apparently between fifty and fifty-five years of age. Asked if he had ever had gonorrhea, his answer was positive. Contracted gonorrhea at about twenty years of age, which passed through all the complications from urethritis to prostatitis, vesiculitis, epididymitis and gonorrheal rheumatism. I advised him that he was probably suffering from urethral stricture, chronic urethritis and chronic prostatitis, in which case internal medication alone would be comparatively worthless, and proposed an examination, to which he agreed, stating that he had suffered no inconvenience from the gonorrhea since he was cured a few months after the acute attack. Examination showed following conditions to exist: Yellow stains on underwear, which he had not noticed. A few drops of yellowish

secretion expressable from the meatus. Right testicle somewhat swollen and sensitive to pressure. Exploration of urethra with No. 14 bougie-a-Boule found broad soft stricture in the deep or bulbous urethra of same caliber, urethra anterior to stricture admitted No. 30. Both lobes of the prostate moderately enlarged and hardened. Both seminal vesicles broad and long; walls very much thickened and moderately hardened. Left lobe of prostate and seminal vesicle larger than the right side. Exploration of urethra was followed by a moderate flow of yellow discharge, which was controlled in a few days with irrigations of permanganate potassium, after which treatment by gradual dilatation massaging the prostate and stripping the seminal vesicles was carried out.

Under this treatment there was an early improvement in the frequency of urination and patient had regained sufficient confidence to make calls of evenings and not have to depart unceremoniously.

Everything went well after first two months' treatment. From then on there was gradual improvement in every way, until patient was not rising to empty the bladder only once at night and occasionally slept all night. Sounds had been gradually increased to No. 31 F by January 24, 1911, at which point the antero-posterior dilator was substituted for the sounds. The dilator was gradually increased to No. 34 on 2d of May, when to all appearances he was about ready for dismissal. So you can readily understand my embarrassment when he appears on May 16th, after just eight months' treatment, and states that he has to rise at night as often as ever and is no better than when I began his treatment.

On receiving this information my first thought was that prostatectomy would probably be necessary to insure permanent relief. However, I advised him that it was probably an ulcer at some point in the urethra that was causing the trouble, and proceeded with examination. Had him empty bladder, then lay on table. Passed soft rubber catheter; only few drops of urine escaped.

Examination prostate showed both lobes to be about normal size and no hardening. Found small induration at upper and left seminal vesicle, the only remaining hardening. Concluding that when the bladder could be perfectly emptied with no decom-

posed urine, there was no cystitis nor prostatic obstruction, operative interference should be unnecessary.

Introducing an endoscope and carrying well into the bladder, a few drops of urine escaping on withdrawal of obturator and absorbing any excess urine covering the field of vision by means of absorbent cotton twisted on applicators, I could detect a superficial ulceration of the trigone from which blood was wiped. The trigone was then cauterized with a solution of silver nitrate 20 grains to the ounce of water. On withdrawal of endoscope from neck of bladder, found a small and well defined ulcer about middle portion of neck and slight hemorrhage. Ulcer was cauterized thoroughly with solution silver nitrate, 40 grains to ounce, and congested portion anterior to ulcer touched with the weaker solution. Patient experienced some immediate relief and was entirely relieved by the two following treatments similar to above, one made on June 6th, and last or third on July 19th. Gave him an occasional massage and dilatation with no return of symptoms until October 6th, when dilator was carried to No. 37. He returned on October 16th, complaining of a return of his old trouble. In dilating to No. 37 the membrane had evidently been torn and the ulcers reopened, as he had a slight rise of temperature for three or four days following this treatment, although an intra-vesical irrigation of permanganate of potassium 1 to 6,000 followed the treatment. The endoscope and nitrate silver was again resorted to on October 16th and 24th, using in both treatments a solution of 60 grains to the ounce. The third and last application was made November 16th with a solution of 30 grains to the ounce of water, since which time he has enjoyed perfect comfort and freedom from rising at night and any undue inclination to urinate frequently during the day up to the present time. No treatment whatever has been given since the 16th of last November.

A rather full history of this case has been given in order to show conclusively that massage of the prostates, stripping of the seminal vesicles and dilatation of strictures and irrigations in many cases do not heal the ulcers or entirely relieve the frequency of urination.

That ulceration of the trigone and vesical neck is an early complication in chronic

posterior urethritis is made clear in the following case: Young man contracted gonorrhea January, 1911. Consulted me May 3d for relief from morning drop at meatus. This was cured after considerable effort. Exploration of urethra with bougie-a-Bouche showed considerable narrowing in deep urethra and slight narrowing at penoscrotal juncture. Prostate and seminal vesicles somewhat large, but not hardened. A few massages were given and dilatation carried out. Later questioned him particularly as to frequency of urinating and ability to retain urine. Did not think he had to urinate more often than was normal, but was compelled to go at once when desire to void came on.

Endoscopic examination November 13th showed superficial ulceration beginning at the compressor urethrae and extending back through neck of bladder into anterior portion of trigone, from which blood stains could be wiped. Cauterizing affected portion of trigone and neck of bladder on this examination and again on December 4th, relieved urgency of voiding urine up to present time without further treatment, covering about five months. It was just ten months from the appearance of the acute anterior urethritis to the date of examination and observance of the ulceration. The first case history shows the time of thirty years or more to have elapsed between the acute infection and the finding of the chronic ulceration of the trigone and vesical neck.

In a few cases I have found deep ulceration in anterior neck of the bladder just back of the compressor urethrae, with free hemorrhage on examination and exhibiting no tendency to frequent urination or rising at night. One of my worst cases of this type of ulceration did not void urine oftener than three or four times in twenty-four hours.

This case was examined in September last. Had gone the rounds for six years. In fact had treated him myself six years previously with very little benefit to the patient or credit to myself. He would impress you in discussing his troubles as being more mental than real. However, the endoscope proved the reverse. Some congestion of the trigone and internal mouth, but not ulcerated. Deep and very intractable ulcer at anterior neck. There has been improvement in this case but not yet cured.

I have not yet examined a single case and found the slightest ulceration of the trigone and internal mouth that did not show a tendency to frequent urination.

The prostate gland is generally blamed for the necessity of rising at night to relieve the bladder. After the hardening and enlargement of the prostate and seminals have been reduced by massaging, and urgency or frequency to empty the bladder still obtain, you may for the true cause look to the vesical neck and trigone. In cases where the prostate and seminal vesicles are but slightly, if at all, enlarged, and frequency of urination exists, you will also find the trigone and vesical neck the source of irritation. These patients can be promptly relieved with the endoscope and a few applications of nitrate of silver.

In such cases as the last named variety, and in fact in all cases where a history of gonorrhea is obtainable, to make a snapshot diagnosis and advise the patient that excision of the prostate is the only method or hope of relief, before making a thorough examination, exploring the urethra, the vesical neck and trigone, as well as Proctoscope examination in the rectum, it seems to me, would be rather premature advice and poor practice, when the use of sounds and endoscope, with mild cauterization would clear up the case and cure the patient without subjecting him to any danger of impotency and would rather improve his potency; for I believe that almost every case of enlarged and hardened prostate and seminal vesicles of truly gonorrheal origin can be cured without operative interference.

These opinions are based on the sequelae of gonorrhea only, though in simple or non-specific ulceration could be applied with equal efficiency.

The seminal vesicles are oftener the underlying cause of these symptoms than the prostate and from personal experience would say that they varied in the ratio of about two to one.

I am unable to get it definitely fixed in my mind the idea that excision of the prostate is necessary in a man who empties his bladder perfectly and has but little, if any, enlargement of the prostate. Therefore, do not subscribe to the often repeated statement that prostatectomy is the only remedy for the relief of an irritable bladder and prostate causing frequent urination and sleepless nights, regardless of

the size of the prostate, when nothing has been done for the relief of the sufferer except the internal administration of urinary antiseptics.

There is a high percentage of vesical ulceration in these cases. Out of ninety cases of chronic posterior gonorrhea seen since January, 1911, twenty-five of the entire number examined with the endoscope were found to be ulcerated, making 28% of the total number seen.

Further examinations have not been feasible on account of strictures of the urethra, which would not admit introduction of No. 24 endoscope. Symptoms presented in the unexamined cases lead me to believe that another 28% or twenty-five more would be found ulcerated on examination. Admitting this conjecture to be correct, then 60% of all cases would be found affected, and range from a superficial to a deep ulceration of trigone and vesical neck. Personally, I believe fully 75% of these cases ulcerated to some degree.

That women suffer from both specific and simple ulceration of vesical neck and trigone is proven to be true. That the text of this paper as applied to examination and treatment of men is equally as applicable to examination and treatment of women the following cases will show:

Married woman about forty years of age consulted me in March, 1910, for some rectal trouble, as she thought. She was rather stout, appeared in full health, but was very nervous. Rectal examination showed no treatment necessary. Had been examined a number of times for uterine trouble and treated for same. Examination of ovaries and uterus made by request and nothing found of an abnormal nature. Attention was then turned to the bladder. I introduced No. 24 lighted urethroscope into bladder (which caused her exquisite pain) and found chronic trigonitis; small well-defined ulcer at middle of vesical neck and a deep infiltration extending in either direction from ulcer, out to meatus and back to internal mouth. Trigone, ulcer and neck was cauterized with solution silver nitrate 10 grains to ounce of water, and repeated in three days. Then irrigated bladder daily for two weeks, after which treatments were irregular to middle of May. Her bladder was cauterized four times in the two months, when she was not seen again until

early in February, 1911, and treated for thirty days, making three applications of silver to the neck of bladder in strengths of 10-20 grains of silver to ounce of water. She received no treatment from March 16th to June 31st, 1911, when she returned, suffering from a recurrence of old symptoms and more nervous than ever. Cauterizing the trigone and neck of bladder this time with silver nitrate the strength of 120 grains to the ounce of water. Treatments were repeated August 9th, September 18th, October 11th, November 20th, and December 19th, alternating treatments with solution of 30 to 60 grains to ounce of water. Had no treatment from December 19th last to February 5th of this year, since which time have irrigated her bladder once a week with solution of potassium permanganate varying in strength from 1-6,000 to 1-2,000, and has no bladder symptoms at time of writing this paper. This was also a case of contracted bladder that would not tolerate more than two or three ounces of a warm solution 1-8,000 potassium permanganate, even this small amount causing severe pain, when treatment was begun two years ago. This month, April, 1912, the bladder tolerated ten ounces of a solution permanganate 1 to 2,000, causing very little pain.

Simple ulceration does not seem more inclined to heal than ulceration of a specific type. Young lady applied for treatment June 14, 1909, ostensibly for "Uric Acid Diathesis or Kidney Trouble." History follows: Fell off a fence September, 1906, and was thrown from a buggy a few days later. Began suffering from pain in pelvis and was operated on in February, 1907, presumably to correct anteversion of uterus. Had never suffered from bladder trouble previous to fall. Called the surgeon's attention to frequency of urinating before leaving hospital. Advised her that the irritation would likely pass away since cause and pressure had been removed. She had gone for two years before consulting me and was gradually growing worse. She was thin and of a neurotic appearance. Urethrascopic examination showed deep congestion of trigone and around internal mouth, small well-defined ulcer in neck near internal mouth and vesical neck highly inflamed out to meatus. She was kept under treatment three months, and cauterized the trigone, ulcer vesical neck four times with solution ni-

trate silver 10 to 20 grains to ounce of water, and irrigating bladder every third day with solutions of permanganate potassium. Dismissed September 17th and returned for re-examination November 9th. Had gained twenty pounds in weight in the five months, June to November. Did not treat the bladder in November, as trouble seemed quiescent and directed attention to pain over left iliac region, which proved to be a slight ulceration in lower end of sigmoid flexure. She experienced more than two years' relief from any bladder symptoms from middle of June, 1909, to middle of October, 1911, when there was a recurrence of irritability, which a short treatment relieved entirely until early in March of this year, when there was slight symptoms of a second recurrence, which short treatment as formerly described relieved and was advised to be examined and treated every three months in future until there was no doubt of a complete recovery. Has lost no weight; gained in early part of treatment.

Five weeks ago was called in consultation to see a young woman who was operated on about six years ago for a similar condition as case just reported, caused also from a fall. This patient is a confirmed invalid and neurotic of two or three years. Endoscope revealed a chronic trigonitis and ulcer at internal mouth of bladder. Cauterized trigone with solution of 30 grains silver nitrate to ounce of water and ulcer with a 60 grains solution. It was stated by the family that she rarely slept any at night, but was up every fifteen to thirty minutes attempting to relieve the bladder and a full hour's rest was unusual. The attending physician tells me today, April 12th, that there is marked relief from the frequency of urinating, and voids the urine only three or four times during the night lately. Nothing has been done for the bladder since examination five weeks ago, but treatment will be continued at intervals of four to six weeks until a cure is effected.

There was nothing in either of these cases to indicate specific infection as a cause of ulceration, though each gave a history of an operation that removed pressure from the vesical neck.

Young woman from an adjoining State presented herself October, 1910, for operation for internal hemorrhoids. This was attended to and she returned home. Con-

sulted me again the following April, stating that she had not been relieved and attributed her nervousness to some trouble about the rectum. Examination excluded the rectum and uterine organs as a cause of nervousness. Making an endoscopic examination, found a deep ulcer about middle of neck of bladder, which was thoroughly cauterized with silver nitrate. She did not exhibit any special nervousness, but was morose and gloomy. Three or four days after ulcer was cauterized she felt much relieved and was bright and cheerful. She had attributed the affection all the while to some indefinite point of the pelvis, and had been many times examined and much treated for nervousness.

My experience with these cases leads me to remark that in many so-called cases of neurotic women, with irritable bladders, that if we would reverse the idea of charging the irritable bladder up to nervousness and charge the nervousness and neurosis to the irritable bladder and treat it as such, probably many of these cases would rapidly clear up. General medicinal treatment fails to relieve them.

Why women suffer so much more from pains and nervousness, are harder to examine, treat and cure than men with identical affections of the trigone and vesical neck I am unable to say, unless it is from what Pilcher's "Practical Cystoscopy" calls. Excrecences which hang down around the vesical neck or form a curtain around the internal mouth of the vesical neck, become inflamed, causing a more general irritability to the trigone and vesical neck. These excrecences are rarely found in men.

Treatment. I have used the word ulceration in contradistinction to infiltration, the text-book terminology, as the average patient is more readily impressed regarding his condition when you say ulceration than when you talk to him about infiltration.

The outfit necessary for making a visual examination of and applications to the trigone and vesical neck is not large and should consist of following instruments and supplies: An electric controller and cord, if your office is supplied with electricity, if not, the dry-cell battery, which can be obtained in a small case with cord, will answer the purpose equally as well as the street current and the controller is not necessary. Endoscope No. 24 F. of what-

ever make preferred and equipped with a light carrier and lamps for illuminating purposes. Applicators, preferably wood, which can be obtained from most drug stores in large quantities at small cost. Clean or sterile absorbent cotton. Solution of nitrate of silver varying in strength from 10 to 60 grains to the ounce of water, say three bottles of 10, 30 and 60 grains to ounce of water. The technique of examination and treatment can be carried out as follows: When meatus and caliber of entire urethra is known to be large enough to admit passage of the No. 24 Endoscope, have patient lay on his back, legs well spread apart, or place feet in stirrups, or knee clutches can be used, with nates brought down even with or a little over the end of the table; stirrups or knee clutches always used in treating women. I prefer the horizontal position with legs well separated for men, as they can be treated in less time and much less strain on the operator than it is possible to treat women. The lamp is first lighted and carrier fixed in shaft of endoscope, then obturator adjusted. Several applications with small pledgets of cotton twisted firmly on either end, which should never be so large that they will not pass easily through the shaft of the endoscope. These with the silver solution are placed within easy reach. A liberal amount of white vaseline is squeezed from tube on end of instrument. Standing on right side of patient, endoscope is passed through urethra down to compressor urethra. At this point throwing the outer end of endoscope slightly backward and pressing over fundus of bladder with left hand, and gently pressing downward and forward until point enters neck of bladder. Then gently pressing the instrument downward between the thighs and at the same time inward, with pressure continued over fundus with left hand, the endoscope will pass readily through the neck into the bladder. The anterior urethra will be doubled back on itself on account of the shortness and straightness of the shaft. Introduction of the instrument being accomplished, the obturator is removed and condition of trigone examined. If inflammation, infiltration or ulceration is found, the surface should be cauterized with a solution nitrate silver, the strength of which would be indicated by the depth to which the tissue is affected. A strength of 20 or 30 grains of silver to the ounce of water is

usually strong enough in the trigone. The solution is applied by means of the cotton applicator and any excess is wiped away with a dry end. As the endoscope is withdrawn the vesical neck should be carefully observed and when ulcerated or infiltrated tissue is found the withdrawal is stopped and the surface cauterized with a strength in accordance with the depth of diseased tissue involved. Thirty to sixty grains silver to the ounce usually suffices, and applied until whitening of the surface is seen. The excess can be wiped away or a small amount left for instillation into the tissues of the roof in case this part of the neck should be diseased. In a number of cases bleeding is quite free and when troublesome the instrument should be held steadily in place, the blood absorbed with the cotton applicators and the stronger solutions of silver applied until cautery is effected and hemorrhage controlled, some cases requiring a strength of 120 grains to the ounce to make the impression. It seems strange that the application of these strong solutions of nitrate silver to a diseased vesical neck produces but very little pain in the majority of cases. In fact, they do not seem to burn as much as a 1 to 5,000 solution forced in through the meatus from an irrigator, though the reaction from the stronger solutions is necessarily longer. The length of time that should exist between these treatments should be from four to six weeks, according to my personal experience, and results obtained. I have gotten better results from strong applications at long intervals than weak applications at short intervals, say every one or two weeks, or either the stronger applications too often repeated. In my first experience with these cases and treatments were being repeated at short intervals, a patient was one day examined and the neck of the bladder found badly ulcerated, and considerable hemorrhage. This case was cauterized with a solution containing silver nitrate grains 120 to water one ounce, and advised to return at the end of two weeks for an examination. He remained away four weeks and on examination the ulceration was found almost healed, and am inclined to believe had he not come back for two or four weeks more the healing process would have been completed. Following this experience, cases have been given ample time to heal. Symptoms indicating endoscopic examinations

of trigone and vesical neck are easily noticeable. Frequent urination and rising at night to empty bladder, blood following introduction of full sized sound and urethroscope shows no infiltration or ulceration of anterior urethra, epithelial scales and mucous, coarse and fine, continuing in the urine, after thorough dilatation, and prostate and seminal vesicles have been reduced to normal size and soft from massaging. If you are not acquainted with anterior urethra, it should be explored before attempting to introduce the endoscope. If stricture of small caliber is found to exist should be gradually dilated to No. 25 or 26 F. before attempting use of endoscope. If ulceration of vesical is discovered early and treated it shortens the treatment and hastens ultimate cure of chronic gonorrhea and its sequelae. Hardened prostates do not soften in response to massaging when there is ulceration or infiltration of the vesical neck covering their surface, especially if deep; but improve at once on healing of ulceration. Report of one case will suffice to show correctness of this contention. Young man thirty-two years of age had stricture deep urethra, prostate gland and seminal vesicles of medium enlargement and very hard. After twenty-two months of assiduous treatment with thorough dilation and much massaging, prostate and seminal would enlarge and reharden if left alone for as long as two or three weeks. Mucous continued to show in urine and blood followed the passage of sounds. Endoscopic examination middle of last October showed ulcer in anterior neck and deep infiltration throughout neck. Following a few applications of silver nitrate prostate and seminal vesicles reduced to normal size with but little massaging and mucous disappeared from urine.

In closing I would again call your attention to this very annoying trouble in women, firmly believing that in numbers of cases of nervous and neurotic women suffering from irritable bladders, the proper treatment of this organ would cure the nervousness and often the neuroses. Look into the bladder and if not diseased no harm is done, but if found diseased, treat the bladder instead of the nerves and in many instances you would find your efforts crowned with the greatest of success.

TWO-STEP METHOD OF ENUCLEATION OF THE PROSTATE*

A. L. Fowler, M.D., Atlanta

In this paper I desire to mention briefly what I regard as the best method of operating in cases of prostatic hypertrophy, and I shall not ask your indulgence to the extent of listening to details and the statistics of cases.

It is the history of nearly all prostates that come into the hands of those of us doing this special work, that the symptoms referable to the genito-urinary tract are of long standing, of gradual increasing urgency and the severity of which greatly disturbs the patient by day, persistently interrupts his sleep at night, while the apprehension of the next urination is attended by a certain amount of dread on the patient's part. It is not surprising, therefore, that a combination of such factors undermines the nervous system.

Physical examination discloses a prostate bulging into the rectal cavity, sometimes only into the vesical cavity, a residual urine of varying quantity showing evidences to naked eye pathology of a low grade of infection of the bladder mucosa and, microscopically, nephritic changes concomitant to arterio-sclerosis. The methylin blue test for 24 hours shows a low, long-drawn out color scale indicating poor elimination by the kidneys.

As a rule the vitality is too low to endure a prostatectomy, and while the patient might pull through, the chances are against him, and it is not fair in my opinion to put him to this severe test.

What do these patients need?

If we answer sanely it is free urinary drainage, absolute physiological rest to the internal and external vesical sphincters, the bladder, and the building up of his exhausted vitality. His damaged organs are sorely in need of rest before any additional strain is to be put upon them.

This much-needed rest can be best attained by a rapid suprapubic cystotomy. The edges of the incision into the bladder wall are stitched to the muscular fascia, and a two-way irrigating glass drainage tube is inserted, the wound is covered with gauze and a mound of gauze is built up well under the arm of the glass drainage

tube to prevent it from gravitating to the vesical mucosa.

The urine is siphoned off and studied, the bladder is irrigated twice daily with a hot oxy-cyanide of mercury solution. These irrigations are continued until the bladder becomes, in a comparative term, "pure and sweet." This requires anywhere from ten days to five or six weeks. Meanwhile, the patient has increased in strength and weight, his urine has improved, his prostate has decreased in size anywhere from twenty to forty per cent, and his bladder has regained its normal healthy tone.

It now may be said that the patient is in prime condition for removal of his prostate. Through the original supra-pubic opening, that meanwhile has become granulating, the prostate is enucleated and the cavity left as a result of its removal is snugly packed with long strips of gauze whose ends protrude through the supra-pubic opening and which are taken out after the second day. This thoroughly prevents any hemorrhage. The glass drainage tube is replaced and may be removed at the time the packing is removed neither of which are used after the second day following the prostatectomy.

The use of calomel and urinary antiseptics are employed to keep the bowel open and to keep the urine in the best possible condition. In a day or two after operation patient is propped up in bed and then put into a reclining chair.

The advantages of the method are free drainage, rest to the damaged organs, giving the patient two little shocks instead of one big one and which is of undoubted value in operating on men whose vitality is below par.

This method has been advocated by Howard Lillienthal, the late Follen Cabot, and others, and their mortality rates have been surprisingly low. Personally, I have removed thirty-three prostates, five of them of the purely fibrous variety, twenty-four of the adeno-fibrous type and four of the adenomatous and without so far a single death. I attribute this to the method absolutely and not in any way to any dexterity on my part.

DISCUSSION ON DR. FOWLER'S PAPER

Dr. E. G. Ballenger, Atlanta, introduced a large canula through the supra-pubic

* Read at meeting of Medical Association of Georgia, Augusta, Ga., April, 1912.

region with the bladder distended; he then withdrew the trocar and left the catheter in place. When the catheter was pushed down into the bladder the canula was withdrawn and the catheter left in place and this gave ample drainage. There was no shock and no leakage of urine about the wound. The condition of the kidneys improve very much when such drainage is provided. The operation is less mutilating, and provides good drainage as well as a means for medication. It is especially valuable when the patients are much debilitated.

Dr. W. L. Champion, Atlanta, said that when the patient's vitality was low it was hazardous to attempt to remove the prostate at one operation. He believed that the supra-pubic operation was better than the perineal, but regarding this there was a great difference of opinion. No doubt there were some prostates that should be removed through the perineal route. The supra-pubic operation was a simple one and could be done quickly.

Dr. M. L. Boyd, of Atlanta, spoke of the preparation of these patients for operation. There are other means of draining the bladder than through a supra-pubic incision, or puncture, and a simpler method he believed was by the introduction of a catheter passed through the urethra and fastened in. If a silk or linen catheter is used it can be readily kept in place, and a cork put in the end and removed at will. He had seen only one case out of about one hundred in whom this method could not be used. Some cases require drainage of the bladder for from four to six weeks, or even longer, before an operation can be safely undertaken, and in this time a bladder drained by the supra-pubic incision is apt to become contracted, and the leakage about the supra-pubic wound become very annoying. He had not yet seen any method by which leakage about the supra-pubic wound could be prevented.

Dr. W. B. Hardman, Commerce, said that he had seen the Mayos at Rochester, Minn., do this operation and they followed the method outlined by Dr. Boyd. They had catheter drainage for weeks and in most cases they now did a supra-pubic operation. The catheter is left in a number of days with constant irrigations after the operation.

Dr. A. L. Fowler, Atlanta, closing the discussion, said that a man could be trained to retain the catheter, and he had had men to retain the catheter for two or three months at a time; but these bladders did not become as pure and sweet as did those bladders drained supra-pubically.

Dr Fowler's objection to draining the bladder with a trocar and canular, and then inserting through this wound a retaining catheter, was that the operation, under these conditions, is not actually divided into two distinct steps since after the bladder is drained there yet has to be done two operations, and **not** divided into two light blows, namely, a supra-pubic cystotomy and a prostatectomy.

In the two-step method it was pointed out in particular that the prostate was enucleated through a granulating wound, the cystotomy having been done long since, so that the prostatectomy therefore could not be attended by whatever amount of shock that goes hand-in-hand with a cystotomy—hence the great advantage of a method delivering two light blows instead of one big blow.

Another very important point he brought out was that supra-pubic drainage afforded absolute physiological rest to the internal and external vesical sphincters; this was of great value.

Dr. Fowler then showed an instrument, a cork-screw, which he used in enucleating the prostate and which idea he got from Dr. Zuckerkandle's clinic at the Rothschild's Hospital in Vienna. He also showed glass drainage tubes employed for supra-pubic drainage, which he said were the ones used by the late Dr. Follen Cabot.

KIDNEY SYMPTOMS AND DIAGNOSIS*

M. L. Boyd, M.D., Atlanta

It would be impossible for me to do more than name all the pathological conditions of the kidneys and their symptoms in the time I have for reading this paper. On that account I have chosen a certain number of the commoner lesions and their symptoms for my discussion. I shall, moreover, have to treat these less fully than I would desire, but I hope that I

* Read at meeting of Medical Association of Georgia, Augusta, Ga., April, 1912.

shall be able to make them sufficiently clear.

By first discussing the general methods by which we arrive at a diagnosis of the kidney lesions I can probably avoid repetition. Inspection is of such slight importance and so well known to you all that I shall not stop to discuss it.

Percussion and palpation show, first of all, whether the kidney is in its normal position or not and, further, whether there is any muscular rigidity, tenderness, mobility, or tumefaction.

By the examination of the urine we determine the presence or absence of albumen, sugar, casts, infection, pus, blood, and, what we must not forget to search for in the unstained specimens, the various signs of parasitic disease.

Wherever pus is found a search should be made for the infecting organism, for ordinarily pus without the presence of bacteria seen with the ordinary stains like methyleneblue, suggests tuberculosis. Sometimes, it is true, pus is found with stones without any infection, or in some of the simpler inflammations such as are produced by taking irritating drugs, but these are usually easily differentiated conditions.

The presence of blood in the urine has a broader significance than the presence of pus for it may be found in practically all of the conditions in which pus appears, and also in various other conditions such as: injuries to the kidney congestions, nephritis, tumors, ulcers, polycystic kidney, parasitic infection of the kidneys, varix of the papilla of the kidney, and in those cases called "essential hematuria". Therefore pus and blood together indicate but little more than pus alone, but blood alone leads us to look for conditions which we would be less apt to suspect if pus, too, were present.

The differentiation of the various types of invading organisms is of no immediate surgical importance, except in cases of tuberculosis, unless we wish in addition to treat our cases with vaccines.

The parasites, their eggs, etc., explain themselves sufficiently not to require discussion here. In Chart No. 1 I have had a few of these things illustrated to refresh your memory.

In cystoscopy and its variations the genito-urinary surgeon finds the foundation for his specialization. Like percussion

and auscultation it is, in the hands of a suitable man, capable of the keenest development as has been shown by what Fenwick, of London, has done with it. Its limitations have as yet not been defined and new instruments are constantly being devised, and new recognizable conditions being discovered.

In kidney diagnosis simple cystoscopy often leads us to a sufficiently satisfactory diagnosis without the employment of more elaborate methods, for it may disclose a projecting ureteral stone, or a vesical tumor, or ulcer which has involved the ureteral orifice. Furthermore certain shapes, sizes and conditions of the ureteral orifice are, when found, known to be significant of given conditions in the kidney and reter. They, however, do not always accompany these conditions, so their absence is not significant of an absence of the lesions.

Varying degrees of injection or reddening of the ureteral orifice is present after hemorrhage issuing from the ureter; this condition is apt to be present oftener, and more markedly, if clots of blood have been extruded.*

With the discharge of purulent urine from a pyelitis the orifice is very apt to be inflamed and swollen.

A marked lengthening, furrowing, and swelling of the orifice is usually indicative of some dilatation beginning in the kidney pelvis and descending, which may, however, be great or slight without reference to the amount of change at the orifice.

The large pale ovaly arched orifice indicates dilatation beginning in the bladder and ascending, or excessive work of the kidney as when one kidney is doing most of the work.

The golf hole orifice indicates dilatation and atony of the ureter. If the edges of the orifice are inflamed and ulcerated we are aware of a pyelitis or pyelonephritis.

Marked oedema of the orifice indicates stone in the lower ureter, or acute tubercular ureteritis.

We readily recognize with the cystoscope such congenital malformations of the ureteral orifice as double orifice, ballooning, and an absence of the orifice.

Ureteral catheterization is, of course, of considerable importance. Since it is by far the most satisfactory method of sepa-

* I am indebted to Fenwick for part of these descriptions.

rating the urine coming from each side I shall not discuss the other methods at all. It may be used in conjunction with the X-rays or the functional test. It may be used to detect strictures and obstructions in the ureter, to measure the capacity of the pelvis and ureter, and by distention of the pelvis with fluid to produce kidney pains similar to those complained of by the patient and thus localize the obscure origin of a pain. By collecting the urine directly through the catheter we can discover whether or not both kidneys, or only one, are affected, or if there is any infection above the bladder.

The value of the functional test has increased considerably since the introduction of phenolsulphonaphthalein for this purpose. It is by far the most reliable and accurate functional test of the kidneys, and I want to call your attention to it, if you have not already become interested. Not only is it of the greatest value in renal surgery, but in nephritis also, and every one of you who desires to know the amount of destruction that has taken place in the kidneys of your nephritis cases should not only know about this substance, but should use it.

No operation should be performed upon a kidney without knowing the functional ability of the other kidney. Otherwise how can we tell that it is not infantile, the seat of polycystic changes or partially destroyed by nephritis or some malignant growth. The value of this knowledge is particularly striking in those cases where all the pain complained of is in the hypertrophying, and healthier kidney while the diseased one may be almost completely destroyed.

The functional test often helps us, moreover, in those cases with a simple hematuria, by showing us the amount of destruction of the kidney and thereby assisting us to differentiate between a malignant destruction of the kidney and the bleeding from such conditions as renal varix.

By the use of the X-ray we are able to outline the course of the ureter if we introduce a catheter which is impermeable to the rays. We can thus determine that such shadows as those caused by phleboliths or small bodies in the intestines are not in the ureter.

By the use of collargol injections and the X-rays we can determine the amount

of the dilatation of the kidney pelvis and the ureter, abnormalities in the position of the kidneys, and kinks and other such obstructions along the course of the ureter.

To facilitate my address to you tonight I have decided to take up the conditions of the kidneys which are due to, first, obstruction with and without infection, and then the infections without obstruction.

The conditions which cause obstructions to the flow of the urine from the kidneys may be roughly classified as follows:

1. Those obstructions due to slightly movable kidney, and to aberrant or abnormal bands of fascia or branches of the renal artery.
2. Abnormally movable kidney causing severer symptoms.
3. Stone in the pelvis or ureter.
4. Tumors, ulcers, etc., of the ureter, kidney, pelvis, or bladder.
5. Stricture of the ureter.
6. Pressure on the ureter by tumors, etc.
7. Urinary obstruction in the lower tract.

The symptoms and results of obstruction depend upon the rapidity with which the obstruction occurs. Sudden complete obstruction or very rapidly advancing obstruction causes severe symptoms with rapid and eventually complete destruction of the kidney. Where the obstruction takes place very slowly we have usually no symptoms until the kidneys are pretty well destroyed, unless an infection takes place when we have the ordinary symptoms of pyelitis or pyelonephritis. The extreme grades of hydronephrosis are produced by long standing partial, and intermittent obstruction.

The cases included under the first sub-heading form a very interesting class of cases, but I shall not discuss them, since I understand that Dr. Shallenberger will treat them rather fully. (See Dr. W. F. Shallenberger's paper.)

The second group of cases, in which we have severer symptoms than those of the first group, includes those cases where the kidney is rather freely movable so that a sudden complete obstruction to the flow of urine can occur, or a torsion of the blood vessels causing those symptoms described by Dietel in 1864, and now called Dietel's Crises. The symptoms are severe pain, nausea, and usually vomiting, prostration and abdominal distension; subse-

quently tenderness in the kidney region, polyuria, and usually blood, casts, epithelial cells, and possibly albumen in the urine.

The diagnosis of the condition is not difficult if we can feel the very movable kidney, the urine is free from pus, the X-ray examination shows no stone. It is in the class of cases in which the movable kidney cannot well be felt that we have the most difficulty in making a diagnosis, and we have then to resort to collargol injections with the X-ray to detect abnormalities in its position and kinks in the ureter, and dilatation of the pelvis with fluid to produce a kidney pain similar to that complained of. The condition has to be differentiated from stone in the pelvis or ureter and a class of cases first called to our attention by Young, of Baltimore, about which I shall speak later, the symptoms of which are due to chronic prostatitis.

Tumors and ulcers of the bladder involving the ureteral orifice cause kidney symptoms varying with amount and the rapidity of the formation of the obstruction. Symptoms may be absent, or there may be an aching in the loin, or kidney colic may occur. The diagnosis is made by the use of the cystoscope. The chief difficulty is in differentiating ulcers, and inflammations caused by purulent discharges from the kidney from the actual bladder conditions, for such secondary changes often mislead the unskilled cystoscopist as the severer forms may resemble carcinoma or papilloma. Should no symptoms of kidney involvement be present it may be necessary to catheterize the ureters if purulent urine cannot be seen coming from the ureter.

Tumors of the ureter and pelvis of the kidney are more difficult to diagnose. The most characteristic symptom is hemorrage, and in the more advanced cases we find tumor in the involved region. The obstruction to the flow of urine by the growths is usually slow and almost symptomless. The hematuria is painless unless clots form and cause sudden obstruction. If careful examinations be made a number of different times suspicious looking cells or particles of tumor may be found. The cystoscope does not help us much except to show the side involved, unless there is some change in the ureteral orifice showing a pelvic dilatation, such as have already

been described, or part of the tumor is seen projecting into the bladder. Sometimes there is a secondary growth in the bladder, and this is of interest not only in the diagnosis of these kidney lesions but we should remember that every case with a papilloma of the bladder should have a very careful examination of the kidneys.

As for strictures of the ureter, they may be congenital or acquired, but I shall only call your attention to the acquired ones which may originate from some of the following conditions: Inflammatory reaction about a once impacted stone or at the seat of a former ulcer, from severe ureteritis or cystitis, or from tubercular infection. From malignant growths or inflammations of the bladder seminal vesicals, appendix, and uterus. Strictures resulting from ureteral injuries at previous extensive pelvic or abdominal operations should not be overlooked, nor those caused by previous severe inflammations such as those which occur sometimes with extrauterine pregnancies.

Diagnosis is not always easy, nor may it be called for by any symptoms until infection or extensive destruction of the kidney has taken place. If a large hydronephrosis has been produced we can find a tumefaction, which rapidly disappears when we pass a catheter through the obstruction, and remove the accumulation of urine. An X-ray with a collargol injection would show us the location of the stricture and the dilatation of the pelvis, while an examination of the ureteral orifice may show us the picture seen at times in dilatation of the kidney pelvis. The functional test would show a decreased functional ability of that kidney.

Obstructions to the urine located in lower tract cause a gradual dilatation of the ureters and pelvis of the kidneys through back pressure, and eventually produce a serious obstruction of the secreting substance of the kidney. There are as a rule no kidney symptoms until destruction begins to be marked. The dilatation and destruction is nearly always bilateral and we may find the oval arching of the ureteral orifice.

It is rather unusual for a fairly well-marked partial obstruction to the flow of urine to exist for very long without an infection occurring above the obstruction. I have not the time to discuss the usual types of invading organisms, nor the other

conditions besides obstruction which might render the kidney susceptible to infection, such as lowered resistance with the infectious diseases, etc., so I shall now turn to a discussion of the additional symptoms which are produced when an infection takes place in the cases with an already existing urinary obstruction. Where the infection is more or less acute we now find infecting organisms in the urine, pus, or an increase in the amount of pus if there has already been some found in the urine, and fever of the septic type. Rigors and chills are common, both as an initial symptom, and not infrequently recurring, sometimes recurring so regularly as to suggest malarial fever. There is a moderate increase in the number of the white blood corpuscles in the blood. In the absence of the more acute pain caused by the obstruction an aching pain is felt in the lower back or in the kidney region behind. Tenderness and muscular rigidity are found by palpation of the kidney region, and the cystoscope usually shows a reddening and swelling about the ureteral orifice, with the ejection of cloudy urine.

The infection in these cases nearly always becomes chronic, although in some cases the course may be acute with rapid and complete destruction of the kidney. Usually the recurring exacerbations of the chronic infection leads to a more gradual destruction of the kidney which is, however, more rapid than that produced by the simple obstructions already discussed. Between the acute exacerbations there may be no fever and no pain, although a tenderness can usually be found in the region of the kidney behind. The continued discharge of pus and organisms sooner or later leads to an infection of the bladder, or to bladder irritability which will manifest itself by frequent, uncomfortable, or painful micturition.

On the location of the obstruction will depend somewhat the changes which we may find at the ureteral orifice for, as we have seen, we find the oval arch with obstructions in the lower urinary tract, while the elongated, turgid orifice is seen in connection with dilatations beginning in the pelvis and coming down. Where the destruction of the kidney is severe we may have a worm-like extrusion of mucous and pus, or a golf-hole orifice.

The infection is nearly always of both kidneys if the obstruction is in the lower

urinary tract. It is difficult to determine from the present evidence whether or not a simultaneous infection of both kidneys usually takes place in the hematogenous infections without obstruction, but there is one thing which we do know and which it is very important that we remember—wherever there is a severe infectious process involving one kidney, the other is very apt to become involved if the condition is allowed to advance sufficiently long without interference. Therefore, it is very desirable that an early diagnosis be made and interference be undertaken at the earliest advisable moment.

We can understand the importance of differentiating between this just mentioned group of infections without obstruction and those with obstruction when we consider the treatment to be pursued. Little more than the relief of the obstruction will often remedy those infections due to obstruction, while quite radical procedures should be undertaken early in those infections without obstruction as I have just shown you. This differentiation is made by the examination of the urine, cystoscopy, and an X-ray picture with and without the collargol injection. Pus in the urine will occur in both conditions unless there is a walled-off abscess in a non-obstructed case. The X-ray might show us such an abscess, especially if it were of long standing. The functional test will help us to differentiate between the simple infection of the pelvis and a more severe grade of infection involving the kidney for the output would be small in the latter case. The chief thing is to determine whether or not we have a urinary obstruction and I have already gone into that sufficiently above.

Tuberculosis of the Kidney

Tuberculosis, as we know, is practically always a descending infection. The tubercular organisms are not usually found unless some special examination is made since they do not take the ordinary stains like methylene blue well. Infections with other organisms at the same time are not rare, and may lead us into error.

The diagnosis is usually made by finding the organisms in the urine. It may be necessary to give tuberculin but it should never be given by the hypodermic method if the skin and eye test will answer.

Debre and Paraf have recently advo-

cated a new method for testing for tuberculosis of the kidneys. The principle of the reaction is based upon the deviation of the compliment. Heitz and Bager have reported forty-three cases with twenty-five positive, two of which were not proven later and one that had a difference between this reaction and the test with tuberculin. Eighteen were negative, seventeen of which were confirmed.

Renal and Ureteral Lithiasis

It is not worth while, I am sure, to call your attention to the ordinary symptoms of stone in the kidney and ureter.

I would like to assure you, however, that practically all stones can be found by the X-ray in the hands of a competent man. The principle difficulty is found with stones lying in the part of the ureter where it crosses the bony pelvis. On this account it is wise to take a picture looking through the pelvis with the patient in a sitting position, as advised by Cabot, of Boston, in 1910.

In 1907 Young, of Baltimore, called attention to the various symptoms produced by the different positions of the calculus in its course down the ureter, in its lower portion. Before proceeding I would like for you to recall the intimate relations between the seminal vesicles, the vas, and the lower part of the ureter. The following is Young's description of the symptoms: When the stone is situated in the ureter above the bladder, the symptoms are pain in the pelvis, sometimes radiating to the penis, but not associated with increased frequency of urination, pain in the rectum, or on ejaculation. There is intermittent renal colic, and perhaps pain in the testicle.

When the stone is situated in the intramural portion of the ureter and does not project into the bladder, there may or may not be frequency of urination, but there is always pain radiating to the end of penis at the end of urination, and there is usually some ejaculatory disturbance—either nocturnal emissions or pain on ejaculation. Pain is sometimes present in the rectum, and intermittent renal colic occurs.

When the stone is caught in the ureteral orifice and projects into the bladder, the symptoms are more severe, and present a typical symptom complex—intermittent attacks of renal colic with radiating pain, pain in the pelvis, rectum, frequent desire

to urinate, and pain during urination, radiating to the glands penis, and pain in the end of the penis during and after ejaculation.

There is another condition, as I have already said, which produces symptoms very much like Dietel's Crises and almost, if not exactly, simulating renal colic, and that is chronic inflammations of the prostate and the vesicle orifice and trigone. They have the radiating kidney pain, nausea and vomiting, and sometimes pus, blood, and an infecting organism is found due to the congestion and infection of the bladder and urethra. I would warn you, then, against operating hurriedly upon cases with suspected stone—for the stone should be demonstrated to exist, if it is possible, or all other conditions should be ruled out.

Where the kidney or kidneys are already seriously injured by a renal calculus, it is generally believed that a pyelotomy should be done for the removal of the stone if it is accessible by that route. This makes it desirable to know whether or not the stone lies within the pelvis or projects well out into the pelvis. Injections of collargol with the X-ray help us to no small extent to solve this problem, but recently Bazay, of Paris, has suggested that this can be learned by measurements made in X-ray pictures. The measurements are made from the mid-line rather than from the spinous processes or lateral portions of the vertebrae since these vary. He has found from the examination of a number of cases that a stone lying within 4.5-5.5 cm. of the middle line is in the pelvis. I have verified this in these cases.

THE VALUE OF URETERAL CATHETERIZATION*

W. F. Shallenberger, M.D., Atlanta

The great advances that have been made in the surgery of the kidney and ureter within recent years have been due, in very large measure, to the greatly improved methods of diagnosis. One has only to glance over the literature of the past decade to see the vast amount of work that has been done along this line. But one must never, in any case, discount a clear, thorough clinical history by too

* Read at meeting of Medical Association of Georgia, Augusta, Ga., April, 1912.

much absorption in or attention to other diagnostic methods. This is often the temptation where we have to depend upon such methods to any extent. There are many cases, however, in which the clinical history is inadequate or even misleading. Pain plays queer pranks at times and is not always a reliable symptom. In kidney disease it may be absent or referred to other organs or to the opposite side.

Examination of a bladder specimen of urine does not give sufficient information in unilateral kidney disease. The X-ray is a valuable adjunct but of itself does not give any positive evidence except where calculus is present.

Cystoscopy and ureteral catheterization with urine segregation together with functional tests are the best and most reliable methods for accurate kidney diagnosis and by these procedures we are enabled to obtain perfectly dependable knowledge that could be gained in no other way.

I shall not go into the anatomy of the ureter except to speak of the nerve supply. This, like the blood supply, is very abundant and there are rich anastomoses with other plexuses, notably the ovarian plexus in women and the spermatic plexus in men. This accounts for the ovarian pain and the testicular retraction in pathological conditions of the ureter. Also uterine and vesicle pain and pain in the urethra and down the thigh are explained by the coalescence of the ureteral plexus with that about the internal iliac artery. Referred pain in kidney and ureter disease is often confusing. How many times we see a patient treated for a cystitis on a diagnosis made from symptoms alone when the real trouble is higher up!

As my work is confined exclusively to gynecology and I have only to deal with women, I use the open speculum method of Dr. Kelly's almost entirely in my cystoscopy. The patient is placed in the knee chest position and when the speculum is inserted the bladder dilates with air. I use either reflected light by means of a head mirror or direct light from a small lamp attached to the speculum. Occasions do arise, however, that demand the use of the closed cystoscope, for example the examination of a very fat woman or one too ill to maintain the knee-chest position. The Sims' lateral position can be used instead of the knee-chest pos-

ture for ureteral catheterization if the hips are well elevated.

The technic of ureteral catheterization is comparatively simple in cases where the normal relations are not too much disturbed. It may be slightly painful, but the catheter can be well lubricated and the pain will be insignificant, as a rule, and the catheter can be readily introduced up into the renal pelvis if necessary.

The uses of ureteral catheterization may be classed under various heads and I shall take them up in the following manner: 1. Diagnostic Purposes; 2. Treatment; 3. As an aid in operative work.

For diagnostic purposes the ureteral catheter is invaluable and it is here that it has its greatest use. Take, for example, a case of urinary infection as evidenced by a pyuria, but where the source of the pus is doubtful. There may or may not be some sign or symptom to give us a hint. Occasionally urine segregation is the only means of determining in a given case. With a catheter in the ureter we can collect the urine directly from the kidney and uncontaminated by the urine from the other side. Bacteriological cultures can be made directly from the kidney and the organism determined in cases of infection. The tubercle bacillus can often be demonstrated in smears made from the sediment of the urine collected by the ureteral catheter. Where a unilateral infection is suspected I always put the catheter in that side alone when possible and thus try to avoid passing a catheter through an infected bladder into a healthy ureter, though I doubt if there is much chance of carrying the infection up if proper precautions are used.

The ureteral catheter is useful in determining and locating strictures of the ureter or impacted stones or in making a diagnosis of stone in the ureter or kidney pelvis. A catheter graduated in centimeters is used for the purpose of mensuration in locating strictures or obstructions. Where a stone is suspected the tip and sides of a catheter are coated with a thin layer of a specially prepared soft wax and if a stone be present the wax will be scratched by contact with it and the scratch marks can be made out by examining with a lens. This is another of Dr. Kelly's methods and by it the diagnosis

¹ Scratch marks on a wax-tipped catheter as a means of determining the presence of stone in the kidney and ureter. H. A. Kelly. *American Journal of Obstetrics*. Vol. XLIV, 1901.

of calculus can be made in many cases. But where a calculus is suspected, one should always resort to the X-ray in every case.

In patients with a hematuria, either with or without infection, there may be no sign or symptom that will lead us to the source of the blood. It is frequently by ureteral catheterization alone that this can be determined.

Nephroptosis and kindred conditions such as kinking of the ureter from some other cause are very often at the bottom of obscure abdominal symptoms and pain. The kidney may be suspected and it is very helpful to be able to determine definitely that it is the offending member. In such conditions the pain is produced by kinking of the ureter in some manner due to sagging of the kidney or to bands of adhesions or fascia hooking up the ureter and there is an interference to the outflow of urine from the renal pelvis and so an overdistention of the pelvis. The pain is dependent largely upon the degree of obstruction present. Thus, in movable kidney, we may have a great deal of pain with only a slight displacement, even Dietl's crises, and again, where the kidney is very movable, there may be no discomfort at all. We wish, primarily, to determine whether the kidney is the seat of the pain. This can be done by distending the renal pelvis by injecting some sterile fluid, preferably normal salt solution, through a catheter with a large syringe. The catheter must be large enough to obturate ureter and thus prevent any escape of fluid around the catheter into the bladder. The pain produced by this forcible dilatation of the pelvis is very characteristic and can be readily identified by the patient as the same pain of which she complains or as an entirely different pain, and in this way the kidney can be determined as the seat of the trouble or ruled out. At the same time the capacity of the renal pelvis can be measured and a hydronephrosis made out if one exists. The normal pelvis capacity is about 7cc. to 8cc. and any amount above 10cc. is considered abnormal. The amount of fluid injected is noted and the outflow collected until the pelvis empties itself and this is measured and compared with the amount injected to see that there has been no escape around the catheter into the bladder. Or the fluid may be colored so it can be recognized in the bladder if it flows around the catheter.

We find hydronephroses varying from a few cubic centimeters above normal on up to several hundred cc., and even a liter or more.

In establishing a diagnosis in these cases we can go a step farther. The ureter and pelvis of the kidney are injected with a solution of collargol or argyrol or eargentos, silver preparations whose solutions are impervious to the X-rays, and an X-ray picture is taken. The outlines of the pelvis and the ureter appear on the plate and much information can be obtained from it. The size and shape of the pelvis and its position can be noted. The relation of the ureter to the pelvis and constrictions and kinks of the ureter can also be determined. Dietlen,² of Strassburg, determines the extent of caseation in tuberculosis of kidney by collargol injections and the X-ray and he believes it could be used for diagnostic purposes in renal tuberculosis and possibly also in tumors of the kidney. Foelcker and v. Lichensberg³ were the first to use collargol in connection with the X-ray in kidney diagnosis in 1906. Stover,⁴ of Denver. Gerraghty, of Baltimore. Braasch,⁵ of Rochester, Minn., Jaches and Furniss,⁶ of New York, and many others have done much work along this line. Various other substances have been tried, such as injections of the ureter and pelvis with air or oxygen, but they are not as satisfactory as the silver preparations.

Where a hydronephrosis or kink in the ureter exists that produces symptoms, steps should be taken to remedy the condition, for the renal function is often greatly impaired by the prolonged increased pressure of the urine. Operation is not always necessary in nephroptosis, but when other measures fail a fixation of the kidney should be done.

Where it is desirable to know the exact course of the ureter, for example, in order to decide whether a shadow on an X-ray plate lies in the course of the ureter when there is doubt as to whether the shadow is from a stone or a phlebolith, this can be done by placing in the ureter an X-ray

² Dietlen, *Zeitschrift fuer Roentgenkunds.* March, 1911.

³ *Pyelographie*, Foelcker & Lichensberg. *Muenchner Med. Wochen.* Vol. LIII, No. 3, 1906.

⁴ *Roentgenographic Diagnosis of Ureteral Kinks Causing Intermittent Hydronephrosis.* G. H. Stover. (To appear in *American Quarterly*.)

⁵ *Value of Pyelography.* W. F. Braasch. *Journal of A. M. A.*, Dec. 16, 1911.

⁶ Jaches & Furniss. Paper read before the New York Academy of Medicine, Oct. 26, 1911.

proof catheter or a catheter containing a small flexible wire stylet which will appear on the X-ray plate. A stone will appear in immediate juxtaposition to the catheter or the stylet, while a phlebolith will most probably be seen apart from the course of the ureter as outlined on the plate.

One of the greatest advantages of the ureteral catheter is that it enables us to make differential determinations of the functional activity of the kidneys. This is of especial value when we are contemplating an operation upon a kidney or a total nephrectomy and wish to know what the other kidney is doing and whether the affected one is destroyed so far as functioning is concerned. I shall not enter into a detailed discussion of functional tests. Numerous methods have been proposed and a large variety of drugs tried in search for an ideal means of accurately determining the functional ability of the kidney. Methylene blue, rosanilin, phloridzin, indigo-carmin, urea estimations, the polyuria test of Albarran, cryoscopy and any number of other tests have been tried and used and advocated by various men. They all have some good points, but they also have some very great drawbacks that render them unreliable and difficult of universal application. Quite recently Gerraghty and Rowntree,⁷ of Baltimore, have tried out a new substance, phenol-sulphonaphthalein, in this connection, and they have found that it apparently answers all the requirements for an ideal drug for functional tests, and I use it almost entirely in my work now. It is easy of administration; it appears in the urine very quickly; it is rapidly excreted by the kidney; it is non-toxic even in large amounts; and the exact percentage put out in a given time can be readily estimated by means of a colorimeter. The drug is administered hypodermically, only .1 cc. of a solution containing 6mg. to the cc. being given. It appears in the urine, as a rule, in from 4 to 8 or 10 minutes and from 40% to 60% of the 6mg. is excreted by the two kidneys together during the first hour after its appearance in normal cases. In pathological conditions of the kidney this amount is decreased in propor-

tion to the damage to the parenchyma or secreting substance of the kidney. By this method we can determine precisely what each separate kidney is capable of doing if we separate the urine from the two kidneys by the ureteral catheter, and this is an invaluable aid in many cases.

For treatment in some conditions the ureteral catheter is useful. In cases of pyelitis lavage of the renal pelvis is easily accomplished and is very efficacious. For the alleviation of pain in renal colic Bransford Lewis,⁸ of St. Louis, has recommended the injection of an alypin solution—about 20 minims of a 1% solution—into the renal pelvis and ureter and he reports good results from its use.

In inoperable carcinoma of the uterus and cervix, where the growth is beginning to encroach upon the ureter, a permanent catheter placed in the ureter may often give much comfort to the patient and may prevent the ultimate formation of a distressing ureteral fistula and even be the means of prolonging life. Such catheters can be left in for weeks at a time though the kidney pelvis must be washed out frequently and the catheter may have to be changed occasionally.

As an aid in operative work the ureteral catheter has its use also. A catheter in the ureter renders it more easily distinguishable and this is of great assistance in operations where the ureter has to be exposed and dissected out, for example, in a pan-hysterectomy for carcinoma. Also in nephrotomy and pyelotomy for calculus a catheter previously placed in the ureter will obturate it and prevent the escape of small bits of stone into the ureter. Then for the purposes of irrigation after operation and to prevent the formation of a fistula by giving free drainage the catheter has its place. Also in the treatment of a post operative fistula.

In order to illustrate a few of the points that I have brought out I shall give a few case reports in brief:

First Patient—A young woman, age 22, who had had an attack of severe pain in the left back and flank and radiating to the groin with blood and pus in the urine following a broncho-pneumonia four months before I saw her. She had been in bed ever since and had never been free from the pain and had frequent recur-

⁷ An Experimental and Clinical Study of the Functional Activity of the Kidneys by Means of Phenol-sulphonaphthalein. Geraghty and Rowntree, *Journal of Pharmacology and Experimental Therapeutics*, July, 1910. Also in *Reports of American Association of Genito-Urinary Surgeons*, 1910.

⁸ A Method of Ameliorating Renal Colic. Bransford Lewis. *Journal of A. M. A.*, Jan. 29, 1910. Vol. LIV, pp. 350-351.

rences of the attacks of severe pain and the blood and pus in the urine. There were also symptoms of a cystitis of more or less severity. A diagnosis of probable tuberculosis of the left kidney had been made and at one time she had been sent to the hospital for a nephrectomy, but owing to her weakened condition and to the fact that she had had a complete anuria for nearly 48 hours at the time of a previous operation, an appendectomy four years ago, the operation was not done and she was sent home. When I saw her first it was at a time between attacks and she was feeling better, but she had never been out of bed. Physical examination gave very little helpful information. There was general abdominal tenderness probably a little more marked on the left side and the tenderness over the kidney points gave a similar result. At first glance it looked like a left-sided or bilateral renal infection though there was no pain on the right side except on pressure. I put a catheter in the left ureter, collected urine for examination and made a functional test with phenolsulphonaphthalein, 6mg. Result, left kidney 31% and the right kidney 5% output during the first hour after appearance the time of appearance being about the same on the two sides. Also the urine from the left kidney was clear and contained no pus cells. The test was repeated two days later with a catheter in the right ureter this time. Result, left kidney 33% right kidney 2% for the first hour and the urine from the right kidney showed a few pus cells, many epithelial cells and a few acid fast bacilli. I removed the right kidney with the result that the patient recovered and is up and about and feeling practically well. The pain on the left side has entirely disappeared. It was apparently of reflex origin. The gross pathological examination showed an acute inflammation of the pelvis and calyces; a number of hemorrhagic areas throughout the kidney substance; several scars and a marked fibrous change in the kidney substance. The cortex was quite thin and in places almost gone and the markings were very indistinct. This case illustrates the danger of relying too much upon pain as a guide and shows what a great assistance the ureteral catheter was in clearing up the diagnosis and also the advantage of the functional test in enabling us to determine the respective values of the two kidneys. I

would have hesitated to take out the right kidney when all the pain was on the left side if I had not known that the left kidney was doing more than an average amount of work.

Second Patient—Woman, age 38. Complaint of a constant pain and soreness in the right kidney region. There were never any severe attacks, as Dietl's crises; the right kidney was readily palpable and tender; the urine was normal. The ureters were catheterized and the capacity of the right renal pelvis, determined by injecting normal salt solution until pain was produced, was 60 cc., more than six times the normal size. The pain produced was an intensification of the old soreness. A functional test with phenolsulphonaphthalein gave the following result: right kidney 6%, left kidney 22% in the first hour. A nephropexy was done and three weeks after the operation I again measured the capacity of the pelvis, which had decreased to 38cc. and another functional test showed the right kidney putting out 13% and the left kidney 25% of the 6mg. in the first hour. The pain was relieved by the operation and we see that the hydronephrosis was decreased and the functional ability of the kidney doubled. I give this case to show what impairment to function can occur in these cases of nephroptosis with hydronephrosis and how important it is to relieve the condition.

Third Patient—A woman 43 years of age. Complained of pain and soreness in the right back and flank with considerable irritability and sense of weight in the bladder for about six months' duration. Lower pole of the kidney palpable, not tender. There was a marked history of constipation in this case. The bladder was normal except for some contraction; the renal pelvis capacity was 10cc.; the pain produced by injecting it was the same pain of which she complained. Functional test—right kidney 16%, left 20%. Collargol injection of the pelvis with an X-ray picture demonstrated a definite kink in the ureter at its junction with the pelvis. Operation—Fixation of the kidney with release of a definite nephrocolic band, which was readily made out as described by Longyear,⁹ of Detroit. The pain and soreness were relieved and the bladder irritability, which was a reflex symptom, cleared up after operation.

⁹ Longyear. American Journal of Obstetrics, Vol. LIV, No. 5.

Fourth Case—Young woman with pain in the left kidney region for about nine months, radiating to the groin and at times down the thigh. Catheterized specimen of urine contained a few pus cells. Bladder showed a slight trigonitis; otherwise normal. Left ureter catheterized and urine obtained for examination showed a few pus cells and a pure culture of *staphylococcus albus* was obtained. X-ray was negative for stone. A functional test showed both kidneys doing a normal amount of work. The pelvis and ureter were washed out about a dozen times with a dilute silver nitrate solution and the pus cleared up entirely. The pain, however, persisted and so I had an X-ray taken with a collargol injection of the pelvis and ureter and it demonstrated a kink in the ureter below the level of the lower pole of the kidney, the kidney being well up in position. At operation I found the kidney freely movable and the ureter held by some rather dense tissue at the point where the kink appeared on the X-ray plate. I freed the ureter and did a fixation of the kidney. The patient made an uneventful recovery and has been free from pain since.

Fifth Case is that of a girl who has had pain in the right kidney region for several years. It is much worse if she goes without corsets or is on her feet for long. The urine was normal. The right renal pelvis held 18cc. before pain was produced by injecting and the pain was the same from which she suffered. A collargol injection and an X-ray picture showed a kink in the ureter at about the same point as that in Case 4. A functional test was not made in this case and she has not come to operation yet.

Sixth Case—Woman, 59. Only complaint was "blood in the urine." The hematuria had been present for nearly a year though she had had the same symptom "years ago." This time it was so severe that there was a marked secondary anemia: Hemoglobin, 40%; red blood cells 2,800,000. There was no pain at all. The left kidney was very movable but was not tender. The bladder was normal, the ureteral orifices were normal. The left ureter was catheterized and the urine from the right side collected transvesically. The urine from the left side was full of blood and that from the right side contained none at all. No pus cells were found and

nothing to indicate the cause of the hemorrhage. It was apparently one of those cases that we call essential renal hematuria as an apology for not being able to determine the cause of the hemorrhage. Operation was advised in this case but was refused.

I have thus enumerated the various uses of the ureteral catheter and we see that it has a wide application. It is readily seen, also, that it is indispensable in many cases for diagnostic purposes where urine segregation and functional determinations of the separate kidneys are necessary. The advantages so far outweigh the objections that have been raised against it that it is not worth while to consider these objections. I know of no other line of work, either in surgery or gynecology, that is more interesting than urology; no other branch where accuracy of diagnostic methods will give more gratifying results than in cystoscopy and ureteral catheterization.

421 Candler Building.

DISCUSSION ON DR. SHALLENBERGER'S PAPER

Dr. J. R. B. Branch, Macon, said that they met with a great number of cases with pain, particularly in the right side of the abdomen, and these patients go from physicians to surgeons and from surgeons to physicians with their condition undiagnosed. He believed that many who did abdominal surgery had seen normal appendices removed because of the existence of this right sided pain. There was frequently no other way of making a diagnosis that was positive except by the use of ureteral catheterization. They got cases sent to them with diagnoses of appendicitis, gallstones and dozens of other things; have performed appendectomies and cholecystostomies and yet obtain no relief. Finally some one would catheterize the ureter and find a dilated pelvis. The use of the ureteral catheter in addition to the use of the cystoscope was very important; often they would find instances where the bladder itself was normal, or was called normal, and yet the kidney would be markedly affected. In some cases there would be present no symptoms whatever on the diseased side; he said he had seen a normal kidney removed when it was the kidney on the op-

posite side that was at fault. If these cases were thoroughly worked out, these mistakes would not occur. Often they met with cases of marked nephroptosis; a nephroptosis did not necessarily affect the rest of the abdominal organs. In anchoring the kidney it seemed to him that it was very important that the kidney should be anchored to the twelfth rib.

Dr. A. L. Fowler, Atlanta, said he wished, as a result of his experience, both at home and at the Necker Hospital, in Paris, where he had worked for three or four months, to lay some stress on the disappointments not infrequently met with in "X-ray" pictures.

In some instances the picture will show a stone but at operation there is no stone to be found. On the other hand he had seen pictures, which, so far as could be determined, revealed no stone, but at operation the presence of stone was disclosed. This, he mentioned, was more likely to occur when the calculous is made up largely of the uratic or softer deposits. It was the experience of many of us, he said, who had seen very much X-ray work, that now and then these pictures are disappointing.

With regard to the injections of collargol into the pelvis of the kidney, the pictures as revealed by the X-ray was of some value, but he thought, like Doctor Fowler, of Denver, Col., and who, by the way, first pointed out this importance, that these pictures should be taken with the patient in both the prone and upright posture, and particularly where **floating kidney** is suspected. He recently saw one photograph which had been taken with the patient in the prone position that led the surgeon to diagnose the disease as that of floating kidney. At operation the kidney was found well up under the ribs and it was with some difficulty that the surgeon delivered it. Had the picture been taken both in the prone and upright positions he doubted if the pictures could have been mis-read.

He said he was very much interested in the doctor's paper, particularly as he himself had done a great deal of cystoscopy. In cancerous growths of the bladder, he said, they **might** be determined by the use of the cystoscope, but they were better diagnosticated, he thought, if the infiltration could be detected by the finger in the rectum, in the male, or in the vagina, in

the female. If the growth had any or all the appearances of malignancy, as observed through the cystoscope, certainly this would confirm the diagnosis.

As to the "oval-arch" and "elongated" ureteral openings being so closely identified with renal disease, as pointed out by the doctor, he respectfully begged leave to differ with him. Before ever having looked into a diseased bladder, or before looking into one whose kidneys above were impaired, as disclosed by the microscope, he had examined, cystoscopically, the bladders of three hundred men at the United States Penitentiary Hospital, men, he said, showing no evidences of disease of the bladder or the kidneys, and had occasionally met with "elongated" and "oval-arched" ureteral openings. He mentioned this, he said, to point out that ureteral openings possessing simply these characteristics, of themselves, did not necessarily signify disease.

Regarding the phenolsulphonephthalein test, he stated that he had recently attended a meeting of the American Urological Association, at which some of the John's Hopkins men had read papers on this particular subject describing it as an almost infallible test for renal function. There were other members, however, who, as brought out in the discussion, were not so loud in their praises and who pointed out its shortcomings or failures. After the discussion the urological association's president, he said pretty well voiced the sense of those present when he said that this test just as the other tests we are in the habit of employing, has its individual drawbacks; but that it certainly possessed merit and simply was one more test which we might add to our armamentarium for determining renal function.

Continuing, Dr. Fowler said that personally he had had no experience with this test, and that it was difficult for one to pick out any one particular test; he was in the habit of using the methylin blue test combined with the urea test and which was pretty generally employed in Europe. Dr. H. F. Harris had suggested to him two or three years ago that perhaps the inhalation of iodine would give as good a test for renal function as any of the tests but he had not, so far, employed it.

Dr. John S. Derr, Atlanta, said he had used the X-ray in making diagnoses of kid-

ney conditions and he could bear out what Dr. Shallenberger had stated in regard to the advantages of the use of collargol injections. A dilated ureter could readily be shown on the X-ray plate and the calices of the kidney were well brought out. Also the size of the kidney pelvis and kinks of the ureter.

With regard to what had been said about uncertain diagnoses of stone in the kidney, he said that he had forty-five (45) cases referred to him since he had been in Atlanta and for diagnosis. He has come to the conclusion that very little can be told by history or symptoms as to whether or not stone is present. The best authorities are of the opinion that with the proper technique, kidney stones can be demonstrated by the X-ray, no matter what their composition or the thickness of the patient. Out of about 45 cases of kidney trouble, the diagnosis of stone has been made nine times. In two of these pus kidney was also diagnosed. Seven of these cases have come to operation and the findings entirely justified the diagnosis.

Dr. M. L. Boyd, Atlanta, said, in reference to stone in the kidneys, that it was important to do a pyelotomy wherever it was possible so that the kidney substance would be destroyed as little as possible. On that account it is important to know whether or not the stone lies in the kidney substance or in the pelvis. Collargol injections of the pelvis with X-ray pictures, are of some assistance, but recently a method has been suggested by Bazay which is much simpler, and consists of measuring the shadow of the stone on the X-ray plate from the middle line of the vertebral column shadow. The measurements are made from the mid-line since the spinous processes and the lateral shadows of the vertebrae are found to vary. All stone lying within 4.5—5.5 cm. of the mid-line are considered to be in the pelvis, and may be approached by pyelotomy.

With regard to phenolsulphonephthalein, while this test has been out only one or two years, it is rapidly becoming known as the most efficient functional test of the kidneys that we have yet found. He did not know of a single instance where an erroneous idea was gained by the use phenolsulphonephthalein, but it has been definitely demonstrated that all of the other functional tests are not to be depended upon when used alone. Urea is not reli-

able; many cases show a high urea output and a very low output of phenolsulphonephthalein. One unoperated case showed at autopsy almost complete destruction of the secreting substance of the kidneys, while during the time just before his death he had put out a comparatively large amount of urea daily. The simplicity in the method of obtaining results with phenolsulphonephthalein as compared with the elaborate system of proceedings through which they go at the foreign clinics, where the functional tests have been most used, at once impresses one familiar with both methods. The phenolsulphonephthalein is given in small hypodermic doses, appears in the urine in 5-10 minutes normally. It is collected for only one or two hours, being in the time very largely passed from the body in the urine and the results are read with a very simple colorimeter. At the end of three hours the whole thing is before you.

Dr. W. F. Shallenberger, Atlanta, closed the discussion. He called attention to the X-ray pictures he had passed around, two prints and one plate showing the kidney pelvis and ureter in each case injected with collargol and demonstrating the presence of a kink in the ureter in each case. These three patients had all had operation, a nephropexy in each instance, and the result was entire relief from the pain caused by the obstruction to the outflow of urine from the renal pelvis owing to the kink. He also told of a patient he had who had a movable kidney with more or less pain, but never any Dietl's crises. The kidney pelvis held sixty (60) c. c. of fluid, which is a good sized hydronephrosis, more than six times the normal size of the renal pelvis. He gave the phenolsulphonephthalein test to this patient to determine the functional activity of the two kidneys, and he found that the right kidney, which was the one involved, put out only 10% of the drug during the first hour, while the left kidney, which was the normal one, put out twenty-eight to thirty per cent. (28% to 30%). He did a suspension of the kidney and three weeks after the operation he again catheterized the ureters and then found that the capacity of the right renal pelvis had decreased from sixty (60) c. c. to thirty-five (35) c. c. The functional test was also repeated and this time the right kidney put out about 20% of the drug, just double what it put out before operation,

and the left kidney put out about the same as the first time, 30%. The obstruction had been relieved by the suspension of the kidney and the hydronephrosis had consequently decreased in size and the functional ability of the kidney had been doubled. This illustrated the importance of relieving any obstruction in the ureter for the function of the kidney always suffers from the back pressure of the urine.

Another patient he reported was a young woman who had been bedridden for four months with attacks of pain in the left kidney region. She had these repeated attacks with blood and pus in the urine and it looked, at first sight, as though she had tuberculosis of the left kidney. She had been sent to the hospital by two doctors with the idea of taking out the left kidney at one time, but they decided she would not stand the operation, so they sent her home again. On physical examination nothing much was learned. He thought possibly there might be a bilateral infection. He catheterized the left ureter and obtained perfectly clear urine from the kidney. He did not then catheterize the right kidney but collected the urine transvesically from the right side. The left kidney, the one that was suspected, returned 30% of the phenolsulphonephthalein in the first hour and the right kidney only put out 5%. The test was repeated a few days later. He catheterized the right ureter this time and obtained cloudy urine from this side and demonstrated acid fast bacilli and pus in smears from the centrifugalized sediment. This time the left kidney put out over thirty per cent. (30%) of the phenolsulphonephthalein again and the right one only put out two or three (2% or 3%) per cent. He operated and removed the right kidney and all the pain on the left side cleared up. It was apparently a reflex pain. Without the use of phenolsulphonephthalein in this case he did not think it would have been possible to determine just what the two kidneys were doing, and without knowing what the left kidney was doing he said he never would have felt like taking out the right kidney in the face of the pain being all in the left kidney region. He thought that the simplicity of the phenolsulphonephthalein test and the short time in which it could be accomplished alone would commend the test above all others that had been tried, all other things being equal, but he also thought that it had been shown

that the test was much more reliable than any of the other of the functional tests.

THE EFFECT OF CERTAIN EXPERIMENTS UPON THE ISLANDS OF LANGERHANS

Although it is now generally believed that the islands of Langerhans are in some way related to the production of diabetes, this hypothesis has not yet been rigidly established by experimental demonstration. There are numerous observers who attribute to the islands other roles in the physiology of the pancreas. According to the "balance theory" of Laguesse there is a regular transformation of acini into islands and of islands into acini, depending upon the demands of carbohydrate metabolism. Still another conception regards the islands as exhausted alveoli, which are nevertheless capable of resuming their normal appearance and function. R. L. Cecil (Journal of Experimental Medicine July 1, 1912) subjected these theories to further analysis by means of inanition experiments, by means of the exhaustion of the pancreas with secretin, and by means of the production of phloridzin and adrenalin diabetes. These experiments are repetitions of those already performed by others, with the improved feature that in the former the islands have actually been counted and measured and the averages obtained have been compared with those obtained from controls. According to Cecil's observations the pancreas of a dog subjected to inanition does not show any active transformation of acini into islands, nor do they demonstrate any notable increase in either the size or the number of the islands after overstimulation of the pancreas with secretin. Moreover, in phloridzin diabetes, as in adrenalin diabetes, the islands of Langerhans are not affected. As the result of these findings, Cecil comes to the general conclusion that the islands of Langerhans are not formed out of exhausted or degenerated acini, but develop from the ducts or acini with which they are often in direct continuity.

THE JOURNAL OF THE MEDICAL
ASSOCIATION OF GEORGIA.

300-302-304 Harison Bldg.

SUBSCRIPTION

PRICE.....ONE DOLLAR PER YEAR

SINGLE COPIES of this calendar year, 15 cents; of the previous calendar year, also 15 cents; two years old, 20 cents; three years old, 25 cents; in other words, 5 cents additional is charged for each year preceding the last calendar year.

REMITTANCES should be made by check, draft, registered letter, money or express order. Currency should not be sent unless the letter is registered. Stamps in amounts under one dollar are acceptable.

CHANGE OF ADDRESS notice should give both the old and the new address, and state whether the change is permanent or temporary. The change notice must reach us ten days in advance of the date of the issue which is to be forwarded to the new address.

WARNING: Pay no money to an agent unless he presents a letter showing authority for making collection.

ADVERTISEMENTS.

Advertising forms go to press eight days in advance of the date of issue. In sending in copy time must be allowed for setting up advertisements and for sending proofs. No proprietary medicines can be advertised until approved by the Council. Advertising rates will be sent on request.

CONTRIBUTIONS.

EXCLUSIVE PUBLICATION: Articles are accepted for publication on condition that they are contributed solely to this journal.

CONTRIBUTIONS TYPEWRITTEN. Authors should have their contributions typewritten—double-space and with ample margin—before submitting them. The expense is small to the author—the satisfaction is great to the editor and printer. We can not promise to return unused manuscript, but try to do so in every instance. Manuscript should not be rolled or folded.

ILLUSTRATIONS: Half-tones and zinc etchings will be furnished by THE JOURNAL when satisfactory photographs or drawings are supplied by the author. Each illustration, table, etc., should bear the author's name on the back. Photographs should be clear and distinct; drawings should be made in black ink on white paper. While we cannot guarantee to return used photographs and drawings, we use our best endeavors to do so after the article is published, if the word "return" is written on the back of each.

ANONYMOUS CONTRIBUTIONS, whether for publications, for information, or in the way of criticism are consigned to the wastebasket unread.

NEWS: Our readers are requested to send us items of news of a medical nature, also marked copies of local newspapers containing matters of interest to physicians. We shall be glad to know the name of the sender in every instance.

VOTE OF HOUSE OF REPRESENTATIVES ON PASSAGE OF MEDICAL PRACTICE ACT, AUGUST 14, 1912

Following is the official vote on the Medical Practice Act. Scan it carefully and see if your representative represented you or the quacks and patent medicine interests:

AYES

Anderson of Chatham, Alexander, Ash-

ley, Ballard, Beck, Blackshear, Blasingame, Booker, Bower, Buchannon, Burnett, Burwell, Butts, Cabaniss, Calhoun, Callaway, Collins of Grady, Converse, Cook, Cordell, Deese, DuBose of Clarke, Ellis, Ferguson, Frederick, Gardner, Garlington, Gastley, Gower, Hardeman, Harrell, Hayes, Hines, Hires, Holtzelaw, Hopkins, James, Johnson, Joiner, Jones of Burke, Jones of Meriwether, Kendrick, Kimbrough, Lane, Lawrence, Lee, Lord of Washington, Lovejoy, MacIntyre of Thomas, McElreath, Massengale, Melton, Merritt, Middleton, Mitchell, Montgomery of Webster, Murphy, Newsome, Nisbet, Parker of Liberty, Paulk of Ben Hill, Paulk of Irwin, Peacock, Ragland, Scott, Slade, Stephens, Strickland, Stovall, Stubbs, Taylor of Laurens, Thurman, Tipples of Tattnall, Tolbert, Turner, Vinson, Waller, Waters, Westmoreland, Williams of Bulloch, Williams of Meriwether, Wimberly, Wohlwender, Wood of Twiggs.

Total ayes—84.

NAYS

Adams, Almand, Baker, Brannon, Bush, Cheney, Christopher, Collins of Mitchell, DeFoor of Clayton, DuBose of Wilkes, DuPree, Elder, Farrar, Foster of Floyd, Frohock, Fullbright, Harris, Hixon, Hollis, Jackson of White, Kirby, Mooty, Nix, Pat-ten, Payton, Ragsdale, Rawlins, Redwine, Reese, Roberts, Simpson, Spence, Spier, Summerlin, Tarver, Thompson, Turnipseed, Upshaw, Wilson, York.

Total nays—40.

ABSENT

Adkins, Anderson of Floyd, Anderson of Gordon, Allen, Ault, Bell, Brison, Brown of Forsyth, Brown of Fulton, Bryan, Burney, Cannon, Chandler, Clark, Collins of Union, Darsey, DeFore of Bibb, Dickey, Field, Foster of Newton, Greene, Hall of Bibb, Hall of Echols, Harper, Harvey, Henderson, Hobbs, Hooper, Jackson of Monroe, Kent, LeSeur, Longino, Lord of Jackson, Lott, MacFarland, McCarthy, McConnell, McCurry, McEntire of Murray, McKee, Miller, Montgomery of Jeff Davis, Moore, Parker of Marion, Pickett, Pierce, Pope, Reaves, Royal, Smith of Dooly, Smith of Henry, Taylor of Ware, Tipples of Appling, Watts, White of Laurens, White of Screven, Wood of Walton, Worsham, Youmans, Mr. Speaker.

TUBERCULOSIS

C. H. RICHARDSON, M.D.
Montezuma

T. E. OERTEL, M.D.
Augusta

J. H. HAMMOND, M.D.
LaFayette

A BETTER UNDERSTANDING NEEDED

If the ordinary practitioner can judge from the current literature on tuberculosis, a perfect understanding does not exist among the various classes of workers engaged in the suppression of this disease.

A well-defined conception by the home physician of the peculiar advantages of the institution, and on the part of the institution doctor, of the existence of conditions which render it necessary for the vast majority of cases to be treated at home regardless of whatever disadvantages and difficulties may be met with there, and a broad recognition of these facts by those who write for our journals, would greatly facilitate and render more effective the fight against this most destructive of the world's maladies.

To send a tuberculous individual to a sanitarium is to destroy a focus of infection. If this could be done in each instance as fast as cases were discovered, in an incredibly short time the disease would practically disappear. Each additional patient to an institution worthy in every sense, means increased material placed under the observation of those best qualified and situated for studying the effects of treatment, and hence by this means, the discovery of improved methods will best be promoted.

These two facts alone seem sufficient to justify the recommendation of the sanitarium in every suitable case. The unfortunate fact, and the one which seems often not to be appreciated, is that very few cases are suitable to be sent away. To the large number of those who cannot well bear a family separation on account of age, being either too young or too old, or too advanced in the disease, or from some other physical condition, and the very large class consisting of those who are unable to afford the expense, and it will probably be admitted that fully nine-tenths, as stated by Dr. Hardman in a recent issue of the Journal, must remain at

home even though the sanitarium may be admitted to possess greater efficiency.

If these statements are true it is very clear that the sanitarium is most valuable in pointing the way, and in arresting the contagion in a limited number of cases, and therefore, will deserve the hearty support of the home doctor, yet in the immediate work of reducing the prevalence of the disease, on account of its necessarily restricted patronage, it cannot be regarded as a very large factor.

On the other hand, it is equally easy to perceive that the arrest of the malady to any great extent will depend on the work done in the homes, amid the great majority need to be taught what, with their continually spreading the infection to others. It is unavailing to tell these that there is a better treatment than they are receiving; they need to be taught what, with their co-operation, can be done for them at home. In like manner, the family physician, who must be the chief actor in the war of extermination, is not enlightened or encouraged by articles which stress institution treatment alone as valuable.

The establishment of private institutions—provided they are of the right type—ought to be welcomed; the effort to make stronger our State sanitarium, which is doing such a splendid work even with its limited means, should receive the earnest co-operation of all physicians and other citizens; the high-class papers written by the authorities, it ought to delight us to read and study; but what we especially need in the country is not enlightenment as to home treatment—for treatment is the same everywhere—but rather an awakening to a full sense of our responsibility, and to a comprehension of the immense good that can be accomplished here.

When we remember that every means of treatment employed in the sanitarium, and obtained by the patient usually at great expense, is equally available in almost every home in the land, practically without cost; that the only advantage possessed by the institution—excepting

change of climate which, when suitably selected, is no doubt helpful in many cases—lies in the superior facility with which measures of treatment can be enforced here with regularity; and more particularly when we realize that the difficulty implied here is continually becoming less, the enlightenment of the people—largely through the educative influence of sanitarium, especially of our own State institution—having rendered them more co-operative with the physician, this field of practice for the earnest doctor appears to be an exceedingly fertile one, capable of yielding the most gratifying returns, and to the competent writer with a rich experience affording a very attractive topic, the development of which in our journals, would be attended with a full measure of usefulness.

J. H. H.

REPORT OF 150 CASES OF PULMONARY TUBERCULOSIS TREATED WITH TUBERCULIN

(Journal A. M. A., August 3, 1912—pp. 332-333.)

Dr. Harry Lee Barnes, Superintendent of the State Sanatorium of Rhode Island, reports 150 cases of phthisis treated with tuberculin during the last five years. The usual type of cases selected for treatment was the chronic one whose disease had been arrested or improved, but whose sputum still contained tubercle bacilli; and who still showed moderate physical signs of the disease.

The tuberculin was given after the technique of Trudeau and tenderness at the point of injection was considered a reaction and was present in most of the cases. Severe reactions did not occur. Fifty-six of the patients received watery extract, forty, old tuberculin, thirty-seven bacilli emulsion, and the remainder bouillon filtrate.

All patients treated were white. Most of those treated had been under observation several months.

The author gives careful tabulation of results and of comparison with similar cases not treated with tuberculin. He reaches the following conclusion:

"While other observers using other methods of tuberculin administration and with more prolonged treatment may get different results, established by equally thorough statistics, this analysis furnishes

no evidence that these 150 patients taken as a whole were influenced by the tuberculin treatment."

T. E. O.

FRESH AIR AND HOW TO USE IT

This is the age of books. Most of them are not worth reading. Too often medical books are merely advertisements in disguise. Often also they have for excuse for existence only a commercial endeavor to meet competition. We find in them the same ideas and even plates that we have seen so often in other books on the same subject.

It is a pity we cannot have a board of censors for medical books. We would thus be spared much wasting of the midnight oil, and our patience would not be worn to a wire edge trying to find out why they were written.

Also there would be fewer book agents. While these gentlemen are mostly good fellows enough, none of us would object if their ranks were decimated by their being compelled to turn their superabundant energies into channels more productive of good to others and of repose to ourselves.

The above being true, and I fear not refutation, we must hail with joy any book upon a medical subject that is entirely free from these strictures—that comes to us upon a real mission, untrammelled by taint of commercialism or suspicion of desire of personal advancement. Such a book is "Fresh Air and How to Use It."

The author is Dr. Thomas Spees Carrington. The book is printed and issued by the National Association for the Study and Prevention of Tuberculosis, of which organization Dr. Carrington is assistant secretary.

This book should be in the hands of every doctor in the land. More than that, it should be in every home in the land where the inmates of the home have intelligence enough to read and understand it. If you do not believe me, spend the small sum charged for it. When you have read it, if you want your money back, the fault lies with yourself and you would best consult someone wiser than you relative to your mental soundness.

The problems of ventilation are treated in a charming, lucid style that is entirely free from technicalities and devoid of

"padding." The author has the rare faculty of saying what he wishes to say and of saying it in the fewest possible words.

If you can't read, the pictures will instruct you. There are one hundred and fifty half-tones, illustrating all manner of open-air devices, from the simplest window tent to the luxurious open-air apartment of the country palace.

The book may be obtained—for the

price—from the National Association for the Study and Prevention of Tuberculosis, 105 East 22d Street, New York City.

If you do not want it for yourself, better buy it anyhow in the interest of your patients.


The monies received for it will be wisely expended by the National Association in the fight against tuberculosis and in the interests of good health. T. E. O.

PEDIATRICS

W. Z. HOLLIDAY, M.D.
Atlanta

W. A. MULHERIN, M.D.
Augusta

M. A. CLARK, M.D.
Macon

 Remember that approximately one-fourth of all deaths occur in the first year of life. A good reason for concerted action by the Medical Association of Georgia along pediatric lines.

A PEDIATRIC SECTION IN THE MEDICAL ASSOCIATION OF GEORGIA OR A GEORGIA PEDIATRIC SOCIETY

The following letter was received by the Pediatric Department last month. We welcome this letter and invite more of its kind—containing suggestions and advice for the betterment and advancement of Pediatrics:

Atlanta, Ga., Aug. 10, 1912.

Dear Doctor—I have been reading your department in our State Journal with a great deal of interest, especially your last article, "Pediatrics is Entitled to More Careful Study." I thoroughly agree with you and feel it is incumbent upon us, who make a specialty of pediatrics to promulgate these facts to the profession and laity at large. To accomplish this end we could do nothing better than "to take the bull by the horns" and form a State Pediatric Society for the study of these great problems that confront us in our every day practice.

I have advocated a movement of this kind here in Atlanta, but have met with little encouragement from those who should be most interested in this field. Other States are organizing such societies, and why not Georgia?

If you think the time is ripe for such a

movement, let's get together and advocate it, and in a few years we will have a society that we will be proud of, and doing a great work in preventive medicine.

We should take a stand for "Certified Milk" for our patients, and advocate a State movement for a purer and better milk supply generally.

Infant mortality, infant hygiene, infant feeding, vital statistics, tuberculosis in children, and a general movement for child's welfare would give us a fertile field for a great work.

Let us get together and organize or at least make an effort in that direction.

Very truly yours,

C. A. RHODES.

Bully for Dr. Clarence A. Rhodes! His letter has the "true ring" to it, and is stimulating. His ideas are sensible, progressive, and timely.

There is not a single Georgia practitioner who does not recognize the advisability of formulating some plan to promote a healthy study of Pediatrics, and by such means uplift this very important branch of medicine to its true and rightful position. It's a regrettable fact, but true, that Georgia, like many other States, has sadly neglected this high mortality producing branch.

Think of the large number of three

pediatric papers being read at our last meeting of the Medical Association of Georgia, out of a total number of seventy-eight.

Think, also, gentlemen, of some physicians in Georgia, advising anxious mothers accordingly: "Oh! let the baby's mammy doctor the child, she knows more about babies than I do." A disgraceful state of affairs, expresses it mildly.

If no further argument be advanced in favor of organization of a Georgia Pediatric Society, or, possibly better, a pediatric section, than the following, it would prove sufficiently convincing to any thinking physician. Statistics show us that approximately **one-fourth of all deaths occur in the first year of life, and that of these about sixty per cent. are due to gastro-intestinal disturbances—a preventable disease.** Of the other forty per cent. of those young infants who die from other causes many could be saved if gastro-intestinal complications could be avoided.

Reflect well over it, gentlemen. **Any branch of medicine that contributes to the general mortality in its first year, one-fourth of all deaths, must be a very important branch of medicine.** Naturally, it would be expected of the profession to give that subject careful consideration and study. If the profession failed to give that consideration and study, and was cognizant of its importance, it could be rightly blamed for negligence.

Now, when sixty per cent. of that one-fourth is due to a preventable disease, the profession truly becomes culpable if it does not make an effort to better such conditions by encouraging work and study along that line.

Internal medicine, surgery, obstetrics, gynaecology, genito-urinary, ophthalmology, laryngology, otology, etc., are all very justly receiving a full share of work and study. Not a single one of these various subjects contributes more largely to general mortality than does Pediatrics. Why, then, should not pediatrics be given as much consideration?

I, for one, will not believe that such a noble and worthy band of physicians, as we proudly claim for Georgia, will turn a deaf ear to the cries and heart-rending entreaties of the grief-stricken mother, who has just lost her baby. Nor will I believe that they will be found derelict in their duties of recognizing the inherent rights of the unborn, the newly born, and the "run

about" children. These little patients have every right to look to us, and furthermore, demand of us, as physicians, a proper study for their physical welfare and hygienic guidance. Rather will I believe that, henceforth, they will find us responsive and loyal to our accepted obligations—willing and true friends of theirs, instead of neglectful ones.

By all means let us establish a pediatric section. The time is not only ripe, but it is imperatively incumbent on us to do something substantial along this line.

We invite a letter from every physician who reads this article. We are not small enough to believe that we "know it all," likewise we are not narrow enough to take offense at a difference of opinion. Sit down and write us your candid opinion on the subject. If you agree with us it will stimulate us to better efforts; if you disapprove, and state reasons for same, it will give us food for thought—just what we want and need.

After feeling the pulse of the State Association, by reading the expected letters from the various members of the Association, we propose to take up in our next issue the "modus operandi" of the pediatric section of the Medical Association of Georgia.

W. A. M.

NEW MEMBERS SINCE LAST ISSUE

B. F. Powell.....	Sylvania
G. M. Overstreet.....	"
W. R. Lovett.....	"
A. B. Reddick.....	"
J. W. Powell.....	"
S. W. Sims.....	"
J. C. Coil.....	"
L. F. Grubbs.....	Americus
W. S. Prather.....	"
T. Lewis.....	"
Frank Cato.....	"
D. B. Moyse.....	"
J. W. Chambliss.....	"
F. A. Thomas.....	"
J. R. Statham.....	"
S. L. McElroy.....	Ocella
J. W. Layfield.....	"
J. C. Luke.....	"
H. B. Dixon.....	"
W. C. Ashly.....	"
H. P. Lyon.....	Mystic
J. W. Hinton.....	High Shoals
J. B. Douglas.....	Talbotton

PELLAGRA

G. M. NILES, M.D.
Atlanta

N. M. MOORE, M.D.
Augusta

E. M. GREEN, M.D.
Milledgeville

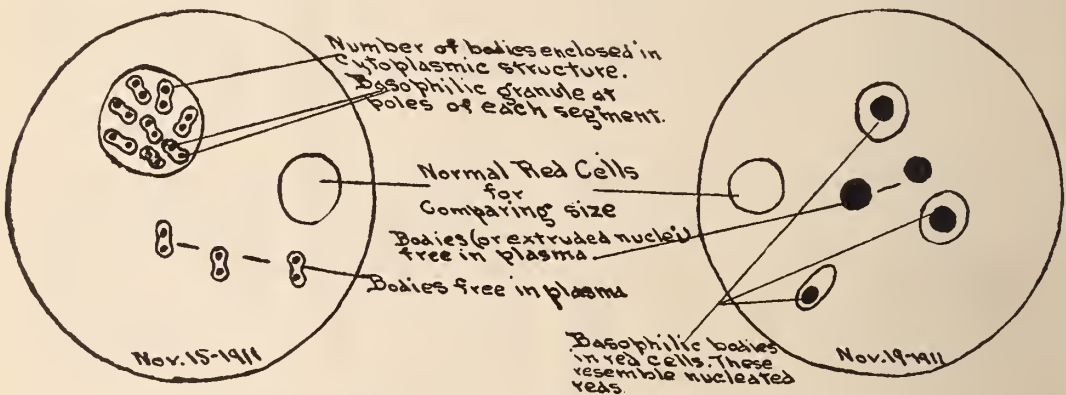
BLOOD FINDINGS IN PELLAGRA

J. A. Johnston, M.D., Augusta
Adj. Professor of Anatomy and Histology,
Medical Department, University of
Georgia, Augusta, Ga.

About the middle of November, 1911,
two cases of pellagra under treatment at

staining technic was used. Controls of
normal persons and those suffering from
other diseases were observed at the same
time. The drawings below show the
bodies which were observed in the pa-
tients at Lamar. Since that time the same
findings have been made in a number of
cases.

At present the author does not desire to
comment on or make any deductions from



Lamar Hospital were studied carefully by
the writer. Hourly blood examinations
were made day and night. Smears were
prepared in the usual way, but a special

the above mentioned observations. Should
a sufficient number of cases present the
same findings a further and complete re-
port will be made.

MEETING OF NATIONAL ASSOCIA- TION FOR THE STUDY OF PELLAGRA

The National Association for the Study
of Pellagra will hold its second triennial
meeting at Columbia, S. C., October 3d and
4th, 1912. The preliminary program as-
sures a most interesting meeting, all
phases of the pellagra problem being cov-
ered by the most competent authorities of
this and many foreign countries. The
Thompson-McFadden Pellagra Commis-
sion, composed of Dr. J. F. Siler, U. S.
Army; Dr. P. E. Garrison, U. S. Navy;
and Dr. W. J. MacNeal, of the Post Grad-
uate Medical School, New York City, will

make a preliminary report on the epi-
demiology of pellagra. The Public Health
Service, which has been making a special
study of pellagra in this State during the
past year, will be represented by Surgeon-
General Rupert Blue, Passed Assistant
Surgeon C. H. Lavinder, and Assistant
Surgeon R. M. Grimm. Such eminent for-
eign authorities as Prof. Victor Babes,
Pathological Institute, Bucharest, Rou-
mania, and Prof. G. Antonini, Director In-
sane Asylum of the Province of Milan,
Mombello, Italy, have contributed papers
for the meeting, and it is expected that
about fifteen foreign countries will be re-
presented. Dr. J. W. Babcock, Columbia,
S. C., a member of the executive commit-
tee, has done more than any one to stimu-

late scientific investigation of pellagra in this country, and the magnificent program promised for this meeting is largely the result of his untiring efforts. The State of South Carolina has not been idle in attempting to protect her citizens from the ravages of this disease, and has instituted vigorous inspection of all corn products. Unfortunately Georgia has been lament-

ably slow in instituting such measures, and damaged corn meal condemned by the South Carolina authorities is freely sold to the citizens of this State.

It is to be hoped that many physicians from this State will avail themselves of the opportunity to attend this meeting.

N. M. M.

GYNECOLOGY

E. G. JONES, M.D.
Atlanta

W. W. BATTEY, Jr., M.D.
Augusta

J. R. B. BRANCH, M.D.
Macon

REPORT OF CASE OF URETHRAL STRICTURE IN HERMAPHRODITE

W. W. Battey, Jr., M.D.
Theo. C. Kershaw, M.D.

Name—R. W., Millen, Ga. Age, 38.
Sex, female. Civil state, married. Occupation, field work and house work.



History—Family history negative as to tuberculosis and lues. Mother had three sets of twins. Sister normal so far as patient knows. Patient has had eleven miscarriages, all "about five months." Has

had difficult urination from young childhood, getting worse periodically. Menstruation very scant. Sometimes misses for three or four months and has done so for years. No pain and no discomfort. No milk in breasts after miscarriages.

Patient shows a very perfect but small penis in place of clitoris and a small vulva. On the anterior wall of the vagina a rudimentary scrotum which shows a well-marked raphe and which is soft and seems to be a sac. (See photo.) Uterus very small. Tubes and ovaries, if present, cannot be palpated under deep anaesthesia.

The patient shows two urethrae, both completely formed and which are shown by probes in photo. These urethrae open externally on either side of apparent scrotum and extend backward as separate canals to within about one-fourth inch of the bladder, where they became one. It was at this point (at the junction of urethrae) that a stricture was found. The same was dilated and a retention catheter inserted into the bladder. After one week patient was dismissed. Examination on dismissal showed that both urethrae were patulous and urine was expelled from both.

This case is reported because of its interest in showing an apparent condition of hermaphroditism, a double urethrae and also a strictured urethra in the female.

Photo by Dr. L. W. Fargo.

PITUITRIN IN THE TREATMENT OF UTERINE HEMORRHAGE

Pituitrin has also given good results in the treatment of metrorrhagia. Bab employed it in thirty cases. In ten the hem-

orrhage stopped one day after the injection; in eleven, two days thereafter; and in seven, between four and eight days thereafter. Bab believes we have discovered in pituitrin a potent remedy for metrorrhagia that has often proved of service when hydrastis, ergot and styptiein were of no avail. He has observed surprising results not only in cases of endometritis, metritis, and menorrhagia, that were possibly attributable to increased ovarian action, but also in hemorrhages that were due to myomata, ovarian cysts, or inflammatory diseases of the adnexa. He administered the pituitrin in doses of two or three cubic centimeters, this amount being injected subcutaneously once or, according to indications, several days in succession. The only after-effect observed, and that only occasionally, was uterine cramps resembling labor-pains.

The discovery of von Frankl-Hochwart that uterine contractions are stimulated by a single injection of pituitrin was supplemented by the work of Hofbauer and Ebeler, who showed that a second injection intensified the action of the first.

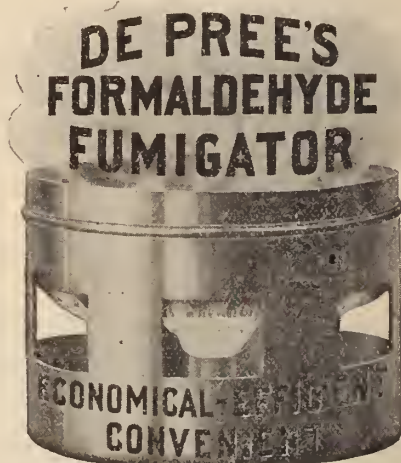
INDUSTRIAL EMPLOYMENT OF MARRIED WOMEN, THE BIRTH RATE, AND THE SEX RATIO AT BIRTH

H. R. Jones has found that the employment of married women in industrial occupations tends to diminish the birth rate. Such employment tends to the birth of a larger proportion of girl infants. Low birth rates tend to the birth of a larger proportion of girl infants. The rate of infantile mortality is higher as the proportion of employed married women rises. The question naturally follows whether the higher mortality is due to the quality of the offspring or to the environment during the year of infancy or to both factors. To answer this requires a more detailed analysis of the causes of death in infancy than is included in the Decennial Report of the Registrar-General, but it is pointed out that the mortality from puerperal fever and childbirth is higher in the textile than in the non-textile districts or in the colliery districts, being 6.74 against 5.12, respectively, and therefore the quality of the offspring is likely to have suffered. Lastly, the author calls attention to the relative influence which the birth rate and the rate of infantile mortality exert on

the number of survivors. With a low birth rate and a low rate of infantile mortality the number of survivors out of 1,000 infants born is greater than if a high birth rate and a high rate of infantile mortality prevails. But if the survivors out of the number of births per 10,000 inhabitants be calculated, it is found that the number of survivors is greater with a high birth rate and a high rate of infantile mortality than with a low birth rate and a low rate of infantile mortality.

EFFICIENCY IN DISINFECTION

Cleanliness, Convenience and Economy
are combined in this fumigator



Liberates a TRUE FORMALDEHYDE gas and leaves no precipitate or residue. Used by BOARDS of HEALTH, HOSPITALS, SCHOOL BOARDS, etc., THROUGHOUT the ENTIRE COUNTRY with every SATISFACTION. We will GUARANTEE you SATISFACTION on a TRIAL ORDER.

MADE IN FOUR SIZES

Fill out this coupon and mail to
THE DEPREE CHEMICAL CO.
Holland, Michigan

and receive free sample and information.

Name

Address

REGULIN

as an addition to
DAILY FOOD
is an ideal way to prevent
AUTOINTOXICATION
by
ELIMINATION.

Sample & Literature
on request.

The Reinschild Chemical Co., 71, Barclay Str., New York City.

RATES FOR REPRINTS

100.....	\$1.00 per page
200.....	1.25 per page
500.....	1.50 per page
1000.....	2.00 per page

Covers to count as four pages when ordered.

The Journal is owned and published by the Association, and all profit goes to make it better. Each member of the Association is financially interested in the Journal to the same extent as every other member, and each member is rightfully anxious for the financial success of the publication.

The greater this financial success, the greater the practical value can be made to the individual member, and hence the greater the value as an advertising medium.

Our advertisers, by their patronage, help to support the Journal, and make its successful publication possible. In return they expect, and rightfully, a fair return for their money. Every dollar spent by a member of the Medical Association of Georgia with advertisers in our Journal, in preference to non-advertisers, is a dollar spent in advancing his own personal advantage, for he has contributed something indirectly to the betterment of his own property.

The Journal cannot exist without the advertisers and their good will.

The advertisers cannot continue in business without the patronage of the medical profession.

The medical man cannot continue in business without the supplies for sale by the Advertisers.

The interests of all are identical—the profession must depend upon the manufacturers, etc. The manufacturers, drug houses, etc, must depend upon the more progressive and more successful physicians. The interests of both are best served through the official Medical Journal—the Journal published by the profession in its own best interests, scientifically and ethically.

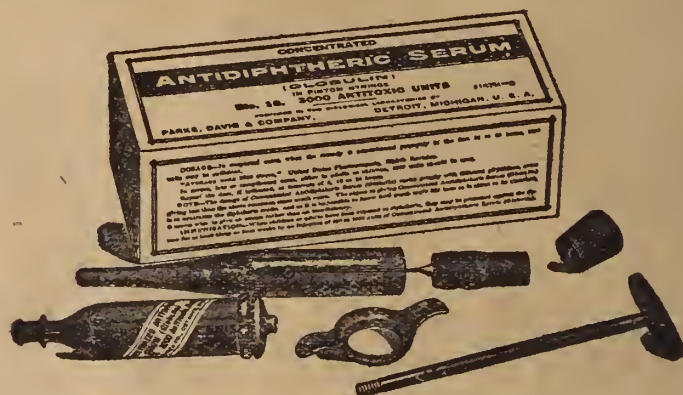
ADVERTISING RATES

1	Page 1 year.....	\$150.00
$\frac{1}{2}$	" 1 "	87.50
$\frac{1}{4}$	" 1 "	50.00
$\frac{1}{8}$	" 1 "	33.00
$\frac{1}{16}$	" 1 "	25.00
1	Page 6 months.....	87.50
$\frac{1}{2}$	" 6 "	50.00
$\frac{1}{4}$	" 6 "	33.00
$\frac{1}{8}$	" 6 "	25.00
$\frac{1}{16}$	" 6 "	20.00
1	Page 3 Months.....	50.00
$\frac{1}{2}$	" 3 "	33.00
$\frac{1}{4}$	" 3 "	15.00
$\frac{1}{8}$	" 3 "	10.00
1	Page 1 month.....	25.00
$\frac{1}{2}$	" 1 "	15.00
$\frac{1}{4}$	" 1 "	10.00
$\frac{1}{8}$	" 1 "	7.50

These rates do not apply to cover pages, space next to reading matter, or matter requiring to be reset.

Antitoxin that justifies your confidence

OUR Concentrated Antidiphtheric Serum (Globulin) is evolved in the blood of healthy, vigorous horses—horses that are carefully selected, and that have been pronounced sound by expert veterinarians. It is perfected in laboratories that afford unequaled facilities for serum production—laboratories in which it is possible to observe, at every step of the process, the vital principles of asepsis. It is exhaustively tested—bacteriologically for purity, physiologically for activity.



The antitoxic potency of our Concentrated Antidiphtheric Serum (Globulin) is expressed in units (Ehrlich standard, as approved by the United States Public Health and Marine Hospital Service), and each package is numbered to correspond to the number of antitoxic units it contains.

Bio. 15— 500 antitoxic units.	Bio. 19— 4000 antitoxic units.
Bio. 16—1000 antitoxic units.	Bio. 20— 5000 antitoxic units.
Bio. 17—2000 antitoxic units.	Bio. 21— 7500 antitoxic units.
Bio. 18—3000 antitoxic units.	Bio. 22—10,000 antitoxic units.

Specify Parke, Davis & Co.'s Concentrated Antidiphtheric Serum (Globulin) on your orders. Have assurance that the antitoxin which you administer is of guaranteed purity, potency and uniformity.

♦ ♦ ♦

PARKE, DAVIS & COMPANY

Laboratories: Detroit, Mich., U.S.A.; Walkerville, Ont.; Hounslow, Eng.

Branches: New York, Chicago, St. Louis, Boston, Baltimore, New Orleans, Kansas City, Minneapolis, Seattle; London, Eng.; Montreal, Que.; Sydney, N.S.W.; St. Petersburg, Russia; Bombay, India; Tokio, Japan; Buenos Aires, Argentina.

The Journal of the Medical Association of Georgia



Published Monthly under Direction of the Council

Editorial and Business Office—300, 302 and 304 Harison Building. Subscription Price, \$1.00

Entered as second-class matter, August 4, 1911, at the Post Office at Augusta, Ga., under the Act of March 3, 1879.

Vol. II AUGUSTA, GA., OCTOBER, 1912 No. 6

CONTENTS AND DIGEST.

ORIGINAL ARTICLES

Tobacco versus Alcohol. By J. G. Dean, M.D. Dawson.....	179
Experimental Pellagra. By Geo. C. Mizell, M.D., Atlanta.....	181
Induction of Labor in Puerperal Eclampsia. By T. J. Carswell, Ph.G., M.D., Waycross.....	184
Discussion on Dr. Carswell's Paper.....	186
Menstruation Normal and Abnormal. By J. R. Bromwell Branch, M.D., Macon.....	187
Discussion on Dr. Branch's Paper.....	189
Intestinal Resection in Strangulated Inguinal Hernia, with Report of Cases. By W. Whatley Battey, Jr., M.D., Augusta.....	191
Discussion on Dr. Battey's Paper.....	193.
Radical Surgery in Cases of Cancerum-Oris or "None," with Report of a Case of Bi-Lateral Infection Complicating Typhoid Fever with Recovery. By Baxter S. Moore, M.D., Atlanta, and John S. Clifford, M.D., Charlotte, N.C.	195.

EDITORIALS

Some Work for You To Do.....	197
------------------------------	-----

SOCIETY NOTES

Eighth District Medical Society.....	198
Ninth District Medical Society.....	198

TUBERCULOSIS

Prognosis and Treatment of Tuberculosis of the Larynx.....	199
Tuberculosis	199

PEDIATRICS

Can We Prevent the Bottle Baby! By Samuel A. Visanska, Ph.G., M.D.....	201
Finkelstein Milk. By Wm. A. Mulherin, M.D.....	205
Why the Pediatricians of Our State Should Organize. By Clarence A. Rhodes, M.D., Atlanta.....	208

MISCELLANEOUS

Surgical Diseases of the Abdomen and Uterus Complicating Pregnancy	198
--	-----

OFFICERS

President.....W. W. PILCHER, M.D., Warrenton
 First Vice-Pres.....J. W. PALMER, M.D., Ailey
 Second Vice-Pres.....T. H. HALL, M.D., Macon
 Sec.-Treas.....W. C. LYLE, M.D., Augusta

COUNCILORS

First Dist.—J. Lawton Hiers, M.D.....Savannah
 Second Dist.—Gordon Chason, M.D.....Bainbridge
 Third Dist.—V. O. Harvard, M.D.....Arabi
 Fourth Dist.—C. L. Williams, M.D.....Columbus
 Fifth Dist.—J. N. Ellis, M.D.....Atlanta
 Sixth Dist.—J. A. Combs, M.D.....Locust Grove
 Seventh Dist.—W. P. Harbin, M.D.....Rome
 Eighth Dist.—I. H. Goss, M.D.....Athens
 Ninth Dist.—W. B. Hardman, M.D.....Commerce
 Tenth Dist.—W. J. Cranston, M.D.....Milledgeville
 Eleventh Dist.—A. G. Little, M.D.....Valdosta
 Twelfth Dist.—E. T. Coleman, M.D.....Graymont

VICE-COUNCILORS

First Dist.—A. J. Mooney, M.D.....Statesboro
 Second Dist.—C. K. Sharpe, M.D.....Arlington
 Third Dist.—A. G. Crittenden, M.D.....Shellman
 Fourth Dist.—T. S. Bailey, M.D.....Newnan
 Fifth Dist.—F. K. Boland, M.D.....Atlanta
 Sixth Dist.—R. H. Stovall, M.D.....Macon
 Seventh Dist.—J. H. Hammond, M.D.....LaFayette
 Eighth Dist.—E. G. Adams, M.D.....Greensboro
 Ninth Dist.—J. S. Tankersley, M.D.....Ellijay
 Tenth Dist.—G. L. Carpenter, M.D.....Wrens
 Eleventh Dist.—J. G. Tuten, M.D.....Jesup
 Twelfth Dist.—M. L. Currie, M.D.....Vidalia

STANDING COMMITTEES**Scientific Work**

E. E. Murphey, M.D., Chairman.....Augusta
 V. H. Bassett, M.D.....Savannah
 W. C. Lyle, M.D., ex-officio.....Augusta

Medical Defense

M. A. Clark, M.D., Chairman.....Macon
 J. N. Ellis, M.D.....Atlanta
 E. T. Coleman, M.D.....Graymont
 J. G. Dean, M.D.....Dawson
 E. G. Jones, M.D.....Atlanta

Organization

T. J. McArthur, M.D., Chairman.....Cordele
 G. R. White, M.D.....Savannah
 W. B. Hardman, M.D.....Commerce

Public Policy and Legislation

J. R. Littleton, M.D., Chairman.....Augusta
 W. L. Champion, M.D.....Atlanta
 C. C. Harrold, M.D.....Macon
 President and Secretary, ex-officio

Necrology

V. D. Lockhart, M.D., Chairman.....Maysville
 W. B. Emery, M.D.....Atlanta
 S. S. Smith, M.D.....Athens
 M. F. Carson, M.D.....Griffin
 J. M. Hull, M.D.....Augusta

Arrangements

(Committee to be selected by the Chatham County Society)

Delegates to American Medical Association

W. H. Doughty, M.D.....Augusta
 E. G. Ballenger, M.D. (alternate).....Atlanta
 T. J. Charlton, M.D.....Savannah
 T. R. Wright, M.D. (alternate).....Augusta

COLLABORATORS**History of Medicine**

J. B. Baird, Sr., M.D.....Atlanta
 L. G. Hardman, M.D.....Commerce
 T. R. Wright, M.D.....Augusta

Medicine

W. W. Jarrell, M.D.....Thomasville
 Ralston Lattimore, M.D.....Savannah
 Thos. D. Coleman, M.D.....Augusta

Tuberculosis

C. H. Richardson, M.D.....Montezuma
 J. H. Hammond, M.D.....LaFayette
 T. E. Oertel, M.D.....Augusta

Pellagra

G. M. Niles, M.D.....Atlanta
 E. M. Green, M.D.....Milledgeville
 N. M. Moore, M.D.....Augusta

Nervous and Mental Diseases

L. M. Gaines, M.D.....Atlanta
 E. T. Gibbes, M.D.....Gainesville
 W. R. Houston, M.D.....Augusta

Pediatrics

W. Z. Holliday, M.D.....Atlanta
 M. A. Clark, M.D.....Macon
 W. A. Mulherin, M.D.....Augusta

Public Health

E. C. Benedict, M.D.....Athens
 H. F. Harris, M.D.....Atlanta
 E. E. Murphey, M.D.....Augusta

Surgery

W. F. Westmoreland, M.D.....Atlanta
 R. P. Glenn, M.D.....Columbus
 W. H. Doughty, Jr., M.D.....Augusta

Orthopedics

H. J. Williams, M.D.....Macon
 Michael Hoke, M.D.....Atlanta
 H. M. Michel, M.D.....Augusta

Genito-Urinary and Syphilis

J. L. Farmer, M.D.....Savannah
 W. L. Champion, M.D.....Atlanta
 H. W. Shaw, M.D.....Augusta

Obstetrics

H. McHatton, M.D.....Macon
 R. L. Miller, M.D.....Waynesboro
 A. J. Kilpatrick, M.D.....Augusta

Gynecology

E. G. Jones, M.D.....Atlanta
 J. R. B. Branch, M.D.....Macon
 W. W. Battey, Jr., M.D.....Augusta

Eye, Ear, Nose and Throat

F. P. Calhoun, M.D.....Atlanta
 H. H. Martin, M.D.....Savannah
 W. C. Lyle, M.D.....Augusta

Roentgology

E. R. Corson, M.D.....Savannah
 J. S. Derr, M.D.....Atlanta
 C. W. Crane, M.D.....Augusta

Anaesthesias

T. J. Collier, M.D.....Atlanta
 Chas. Usher, M.D.....Savannah
 M. S. Levy, M.D.....Augusta

Laboratories

K. R. Collins, M.D.....Atlanta
 V. H. Bassett, M.D.....Savannah
 Everard Wilcox, M.D.....Augusta

DISTRICT SOCIETIES

DISTRICT	PRESIDENT	SECRETARY
First	E. T. Coleman.....Graymont	Chas. Usher.....Savannah
Second	Hugo Robinson.....Alhany	F. M. Martin.....Shellman
Third	C. A. Greer.....Oglethorpe	M. R. Smith.....Cordele
Fourth	H. J. Goodwin.....Roopville	Homer Boatright.....Carrollton
Fifth	W. D. Travis.....Covington	W. S. Ansley.....Decatur
Sixth	W. J. Little.....Macon	L. H. Adams.....Macon
Seventh	A. B. Greene.....Cartersville	T. Lowry.....Euharlee
Eighth	T. J. Willis.....Washington	D. H. DuPre.....Athens
Ninth	V. D. Lockhart.....Maysville	A. D. White.....Gainesville
Tenth	J. R. Beall.....Blythe	G. A. Traylor.....Augusta
Eleventh	H. C. Wheelchel.....Douglas	T. J. Carswell.....Waycross
Twelfth	J. L. Weddington.....Duhlin	C. R. Riner.....Summit

COUNTY SOCIETIES

COUNTY	PRESIDENT	SECRETARY
Baldwin	J. W. Mohley.....Milledgeville	W. F. Tanner.....Milledgeville
Banks	V. D. Lockhart.....Maysville	J. D. Rice.....Homer
Bartow	A. T. Calhoun.....Cartersville	H. E. Felton.....Cartersville
Ben Hill	E. J. Dorminy.....Fitzgerald	L. S. Osborne.....Fitzgerald
Bibb	F. M. Cunningham.....Macon	W. D. Hereford.....Macon
Blue Ridge	J. S. Tankersley.....Ellijay	C. B. Crawford.....Blue Ridge
Brooks	S. S. Galuden.....Quitman	J. S. King.....Quitman
Bulloch	D. E. McEachern.....Statesboro	F. F. Floyd.....Statesboro
Burke	C. H. Cox.....Waynesboro	J. M. Byne.....Waynesboro
Butts	B. F. Aiken.....Jenkins	W. H. Steele.....Jackson
Carroll	M. M. Hallum.....Carrollton	R. E. Foster.....Carrollton
Chatham	V. H. Bassett.....Savannah	A. J. Waring.....Savannah
Clarke	A. C. Holliday.....Athens	M. F. Matthews.....Athens
Cobb	W. M. Kemp.....Marietta	W. H. Perkinson.....Marietta
Coffee	C. W. Roherts.....Douglas	Quitman Holton.....Douglas
Colquitt	J. H. Green.....Hartsfield	J. E. Lanier.....Moultrie
Coweta	T. B. Davis.....Newnan	T. S. Bailey.....Newnan
Crisp	A. J. Wheelchel.....Cordele	T. E. Bradley.....Cordele
Decatur	N. L. Spengler.....Donalsonville	Gordon Chason.....Bainbridge
DeKalb	A. R. Watkins.....Chamblee	W. S. Ansley.....Decatur
Dougherty	C. W. Walker.....Albany	Hugo Robinson.....Albany
Elbert	C. E. Earle.....Elberton	L. P. Eherhart.....Elberton
Emanuel	C. R. Riner.....Summit	R. C. Franklin.....Graymont
Floyd	W. W. Mangum.....Rome	W. L. Funkhouser.....Rome
Forsyth	F. G. Moss.....Royston	J. H. Hockenhuil.....Cumming
Franklin	L. B. Clarke.....Atlanta	B. T. Smith.....Carnesville
Fulton	W. B. Floyd.....Plainville	R. R. Daly.....Atlanta
Gordon	C. O. Copelan.....White Plains	E. O. Shellhorse.....Calhoun
Greene	W. V. Chandler.....Baldwin	E. G. Adams.....Greensboro
Habersham	A. D. White.....Gainesville	R. B. Lamb.....Demorest
Hall	R. C. Wiley.....Sparta	E. T. Gihhs.....Gainesville
Hancock	L. Landers.....Commerce	J. A. Brown.....Sparta
Jackson	F. S. Belcher.....Monticello	J. C. Bennett.....Jefferson
Jasper	J. W. Pilcher.....Stellaville	C. L. Ridley.....Hillshoro
Jefferson	L. J. Belt.....Milen	G. L. Carpenter.....Wrens
Jenkins	J. J. Baston.....Duhlin	W. E. Rushing.....Millen
Laurens	A. Griffin.....Valdosta	W. C. Thompson.....Dublin
Lowndes	C. H. Richardson.....Montezuma	J. M. Smith.....Valdosta
Macon	L. E. Roper.....Comer	C. A. Greer.....Oglethorpe
Madison	E. B. Terrell.....Greenville	J. L. Baker.....Carlton
Meriwether	J. F. Lancaster.....Forsyth	P. W. Fitts.....Greenville
Monroe	J. M. Croke.....Columbus	G. O. Elrod.....Forsyth
Muscogee	Sterling Gihson.....Thomson	J. S. Murray.....Columbus
McDuffie	S. W. Everett.....Almon	B. F. Riley.....Thomson
Newton	J. T. Elder.....Farmington	O. L. Holmes.....Covington
Oconee	J. D. Herrman.....Eastman	W. M. White.....Watkinsville
Ocmulgee	R. A. Mallory.....Concord	J. C. Wall.....Eastman
Pike	C. V. Wood.....Cedartown	M. M. Head.....Zebulon
Polk	V. H. Taliaferro.....Eatonton	H. M. Hall.....Cedartown
Putnam	E. C. McCurdy.....Shellman	S. A. Clark.....Eatonton
Randolph	T. D. Coleman.....Augusta	P. G. Barfield.....Cuthbert
Richmond	E. R. Anthony.....Griffin	W. C. Kellogg.....Augusta
Spalding	Jeff Davis.....Toccoa	J. M. Thomas.....Griffin
Stephens	R. L. Grier.....Lumpkin	C. L. Ayers.....Toccoa
Stewart	J. A. Rhodes.....Crawfordville	M. Walton.....Lumpkin
Taliaferro	J. T. Arnold.....Parrot	L. R. Brown.....Sharon
Terrell	W. W. Jarrell.....Thomasville	C. T. Kenyon.....Dawson
Thomas	W. H. Hendricks.....Tifton	Harry Ainsworth.....Thomasville
Tift	J. M. Meadows.....Vidalia	L. A. Baker.....Tifton
Toomhs	H. L. Carroll.....Babcock	T. C. Thompson.....Vidalia
Tri	F. M. Ridley, Jr.....LaGrange	C. K. Sharp.....Arlington
Troup	J. M. Underwood.....Lafayette	John Banks.....LaGrange
Walker	J. C. Rippard.....Waycross	J. H. Hammond.....Lafayette
Ware	G. R. Maner.....Warrenton	T. J. Carswell.....Waycross
Warren	J. G. Tuten.....Jesup	R. D. Nash.....Norwood
Wayne	A. W. Simpson.....Washington	E. C. Crummev.....Jesup
Wilkes	W. C. Tipton.....Sylvester	O. S. Wood.....Washington
Worth		J. L. Tracy.....Sylvester

Journal of the Medical Association of Georgia

W. C. LYLE, M.D., Editor - Augusta, Georgia

TOBACCO versus ALCOHOL*

J. G. Dean, M.D., Dawson

It is not my purpose to pose as a "Mentor," a "Better than thou," individual, nor to offer you anything new on the very common or hackneyed subjects, Alcohol and Tobacco. I want to admit, too, in the outset, that I have no fight to make on the man who loves either tobacco or alcohol. I am not one of the latter-day "prohibitionists," but am an earnest believer in the practical treatment of any evil, and the so-called prohibition laws of the country are exceedingly impractical. I am, however, in a position to be thoroughly consistent in all I may say against either the evils of alcohol or of tobacco, in that I have never been an indulger in the use of either.

My purpose in selecting this subject was because of my earnest belief that in the use of tobacco there is much greater danger to mankind than is realized by even the most intelligent class of our people. The evils of alcohol are recognized by a ten-year-old child, or by the ordinary negro. Its ravages are swift, patent and sure, and no one undertakes to gainsay such assertion. It is not necessary to go into statistics nor to unfold well-known facts afresh to show to a gathering of doctors the evils of excessive use of alcoholics or malt. Such a course would be almost an inexcusable presumption on an occasion like this. No, my object is to try to create at least a little more adverse sentiment to the use of that weed which we borrowed from the American savage.

The great philosophers, poets, orators and athletes of ancient Greece knew nothing of tobacco, and until today we look upon them as in reality our masters in such arts or sciences. When men lived to be hundreds of years of age there was no tobacco to make its insidious inroads on their minds and physical make-up. Suppose old father Methusalah had been a cigarette fiend! Will any one undertake

to say that he would have claimed in this great world an existence of 969 years? I dare say he would have had but a slim chance at a single hundred of years. We have, however, to admit that the use of alcoholics, wine, etc., is coexistent with mankind. We read in Holy Writ that Noah, the only head of a family left after the flood, went a little too far with his cup, but nowhere in that Great Book do we find an account of any reveling with the curling smoke of the tobacco pipe, nor of the indulgence of the filthy habit of chewing the weed. Still, in those days men grew to far greater age than is true of later times, and there was wine, and to spare. It remained for the arrival of Columbus in the New World for the first knowledge of tobacco to be given to the civilized world. He found it first on the island of Cuba. It was not, however, until about the year 1558 that it found its way to Europe, and it was a doctor, Francisco Fernandez, who introduced it there. It was still later that it began to spread throughout that country, and it was an ambassador of France who then brought this about by disseminating it from Portugal. His name was Jean Nicot, and from him it has gotten its botanical name, Nicotina, and from him comes the name of that virulent poison, contained in tobacco, Nicotine. At first the plant was supposed to possess almost supernatural healing powers, so that it was termed "herba panacea," "herba santa," "divine tobacco," etc. It was through English example that the habit of smoking spread. Ralph Lane, the first governor of Virginia, is credited with being the first Englishman to contract the habit of smoking. The "illustrious Sir Walter Raleigh took a pipe of tobacco before going to the scaffold", and thence forward the habit grew and soon became a popular one. The use of tobacco has grown rapidly and is now a product of many parts of the world. It is, too, a source of revenue everywhere to the government. There is not as much per capita used in Europe as in this country, but its increase there is steady. The amount of tobacco now used is simply staggering. Not less than 500,000,000 pounds are be-

* Read at meeting of Medical Association of Georgia, Augusta, Ga., April, 1912.

ing produced in this country annually on about 700,000 acres and its value is approximately \$50,000,000. These figures stamp it as the most extensively used narcotic in existence, and indicate the great power for evil which has virtually taken possession of mankind. Unlike alcohol whose work is usually rapid and can be constantly observed by the simplest individual, the danger from the tobacco habit is an insidious one, and is one which is indulged by every class of people, and regarded by none as tending to lower man in the social or moral scale. This situation, in my opinion, makes immeasurably greater the possibilities for evil from this poisonous plant than is true of alcohol. Public sentiment, religious influences, parental training, and common sense make for restraint in the use of alcohol, but such is true to but a very limited extent in the case of the tobacco habit. People have not been educated as to the possibilities for evil from this habit. No statistics of its results have been gathered as in the case of the alcoholic habit. This is a situation which should not exist. Now, let's see why more attention should be given to tobacco's evil possibilities. What is there in the weed which creates a desire so powerful that but few ever desist from its use when once the habit is formed? First, it is a narcotic, and narcotics lead to habit, if their use is persisted in. It contains among its constituent parts, phosphates, nitrates, pyridine, and nicotine. These are all poisonous, and the last-named ingredient, nicotine, is one of the most powerful poisons. Death has occurred from it in three minutes after its ingestion. Tobacco first stimulates, lowering the heart's action through its effect on the vagus, then it paralyzes the same nerve and thus increases the heart's action and blood pressure. There is a pleasurable sensation to him whom the habit has come to, but there is beyond question a steady growth of evil to the average individual, in that there is tendency to increased blood pressure, digestive derangements and other troubles arising through the nervous system, as, in some instances, a weakening of vision, etc. The continued use of tobacco, either in smoking or chewing, produces granular inflammation of the fauces and pharynx, atrophy of the retina, dyspepsia, lowered sexual power, sudden faints, nervous depression, cardiac irritability, and occasional angina pectoris.

Used by the young it hinders the development of the higher nerve centers and impairs the nutrition of the body by interfering with the process of digestion and assimilation. There are many cancers of the mouth, lips, and tongue which have their origin in the use of the pipe or cigar. It blunts the moral senses, and unquestionably has led to mental aberration and to even insanity. We are all familiar with the so-called tobacco heart, a condition accompanied by palpitation, irregular and intermittent action, increased rapidity of action and often more or less precordial pain.

Pyridin, a poison of tobacco, is used to denature alcohol, and besides this and other poisons named, the plant also contains carbon dioxide, the powerfully poisonous gas found in mines. Is it then to be wondered at that a substance with such deadly poisons among its contents should lead to such degenerative diseases and to death?

As said before "the immediate effects are pleasurable, and unless large quantities are used, degenerative changes, or even the gradual lowering of resistance to disease, will not be noticed either by the smoker or the physician, until something serious happens to enlighten them." A certain philosopher has said of the use of alcohol: "It bridges over the pitfalls which the complicated conditions of modern life are digging for us. For that is the legitimate function of alcohol—to diminish the friction of living." This philosopher was also a lover of tobacco and no doubt had a similar conception of its use.

We have seen, therefore, that the evil effects of tobacco include very many of the ills to which "flesh is heir," as dyspepsia, catarrhal troubles of the nose and throat, heart disturbances, increased blood pressure with its accompanying arteriosclerosis, nervous instability, impaired eye-sight, etc. But a few days since I chanced to see a man who was but a living skeleton. He was about six feet in height and weighed but 55 pounds. He stated he had once weighed 175 pounds. He is now a subject of muscular atrophy and states that the entire trouble was due to the excessive use of the deadly cigarette, the use of which he began at the tender age of seven years. He is now 36 years of age.

Can the insurance companies be blamed

for their increasing attention to blood pressure, the use of tobacco, etc.? I can but believe that the insidious evil effects of tobacco is playing an alarming influence in increasing degenerative diseases, especially in the masculine population of our country. If you have not observed the comparative safety of life insurance risks as between man and woman, begin to do so. I am persuaded many of you will be surprised in a comparatively short time. I have been watching this for the quarter of a century of my experience in medicine, and I have long since arrived at the conclusion that, if I were myself an insurance company I would be more liberal in my treatment of the female than in the case of the male applicant. Not long ago, impressed by the belief that the mortality among the men of my own town had been in excess of that of the women of the place, I concluded to make a mental inventory of the men and women of the town who had lost their companions in life. The result showed an even greater disparity than I had looked for. I found there were 73 men and women who had become widowers or widows, and of this number 49 were women, showing a death rate greater by 100% among the men than among the women in the same time. This, I confess, must be unusual, and may not be true of all towns, but it is what I found by actual count among my acquaintances there. Now, I do not allege that the use of tobacco by men was the only factor producing such result, for men are given to alcoholies and other habits which tell on their vitality much more rapidly than do the habits incident to the lives of average women, but I believe the tobacco habit has very largely to do with this excessive mortality among the men. The women, with comparatively few exceptions do not indulge this unfortunate habit. We, the medical profession, have been persistently fighting preventable diseases for a number of years. We have made war on smallpox, diphtheria, typhoid fever, yellow fever, malaria, and numerous other diseases. We are fighting hookworms, flies and mosquitoes; why, now, should we not begin to think more seriously of the many ills which might be avoided by the restriction of the use of the American savage's narcotic? King James I said of its use: "A custom loathsome to the eye, hateful to the nose, harmful to the brain, dangerous to the lungs, and the black stinking

fumes thereof nearest resemble the horrible Stygian smoke of the pit that is bottomless."

EXPERIMENTAL PELLAGRA*

Geo. C. Mizell, M.D., Atlanta

In all experimental work to show the cause of pellagra, extracts of spoiled corn or the organisms from spoiled corn have been used. Much labor has been expended to identify the specific agent. Various results have been obtained and, as Sir Patrick Manson comments, "one fact stands out very prominently and that is that each investigator claims to have reproduced true pellagra, either in animals or men, sometimes in himself, by inoculating beneath the skin, injecting into the veins or administering per orem the special organisms or toxic products which he happens to have isolated."

Nevertheless, the experimental work done by scientific men has been sufficient to show to their satisfaction and to convince many others that pellagra has been produced experimentally.

Out of the confusion of evidence arises the question which, if either, of the suspected agents—the chemicals or organisms—is the true cause of the disease? Passing over this question by stating that it appears that the weight of evidence is in favor of a chemical agent and that this view is the one most generally accepted by the disciples of the maize theory, we ask what, then, is the nature of the chemical? Briefly stated, the method of obtaining the toxic substances of spoiled corn is as follows: The corn is placed in a vessel one-third filled with water and carried slowly through the acetic, alcoholic, lactic and putrid stages of fermentation. It is then dried, ground and extracted with 40 per cent. alcohol. The tincture thus obtained is evaporated on a water bath. The residue contains the toxic substances. In this process no certain organism is mentioned nor any particular organism seems necessary. These toxic substances have been designated as: 1st, The Red Oil of Spoiled Corn; 2d, The Toxic Substance of Spoiled Corn, or Pellagrosine; and 3d, The Resinous Substance of Spoiled Corn.

The first and third of these substances

* Read at meeting of Medical Association of Georgia, Augusta, Ga., April, 1912.

are clearly of an oleogenous nature and in the second, while no intimation of its nature is given, two of the tests to which it was submitted seem to exclude the possibility of an alkaloid. The tests are these: 1st. It is soluble in a solution of caustic potash. 2d. From this solution it is precipitated by sulphuric acid. Another significant reaction is that it produces a green color with copper sulphate.

It is claimed that a poisonous alkaloid has been separated from the oil and resinous substances, but after the alkaloid has been separated the oil and resinous substance is still poisonous in small doses—"a thing which proves that the alkaloid is not the only poisonous substance in spoiled corn." The source of these poisonous substances, Peschal states, is through the action of the *Bacterium Modis* on the albuminous and oleogenous constituents of corn. That the character of the fat acted upon is important is shown by the fact that no poisonous substance is developed by the growth of *Bacteria Modis* upon blood serum. Unfortunately these fatty substances have been little studied, in fact, exact chemical methods for the study of these substances are wanting, as evidenced by the statement of Lewkowitch that the only method of identifying rancid fat is the sense of smell.

In the process of preparation outlined above the oil of corn would, under the influence of air, moisture and the ferments, present in the corn, undergo oxidation or fermentation, giving rise to the oxidation products of oil of corn. These oxidation products are numerous and from the properties given of the extracts, red oil of spoiled corn, pellagrosine and resinous substances may all be derived from the oil of corn through oxidation. Association with albuminous matter may or may not be necessary.

It is no digression from the subject to discuss at this point this conception of the disease for in doing so the stumbling block to the general acceptance of any of the theories so far advanced may be removed.

Lombroso's theory, which experimentation seems to have proven as conclusively as any proposition in medicine, may be stated as follows: Spoiled corn contains a toxico-chemical agent, which if consumed in sufficient amount for a sufficient time will produce pellagra.

The experimental work and this theory classifies the disease as a toxico-chemical

disease and as such it should resemble toxico-chemical diseases in seasonal incidence in that diseases of this class occur at any period of the year. For example, Berri-berri, ergotism, alcoholism have no seasonal incidence.

Furthermore, in poisons of this nature the symptoms abate or persist, according to the presence or absence of the poison in the food of the patient. It is said that spoiled corn produces blind staggers in horses, which disappears when the noxious food is withdrawn. Once established the symptoms of pellagra continue and recur irrespective of the spoiled corn in the diet. It is held, and rightly so, that it is the continuous consumption of spoiled corn that causes pellagra. This is shown by all of the experiments performed and it is stated that the Italian pellagrines live exclusively on spoiled corn. Antonini is said to have produced pellagra in seven people by feeding them exclusively on spoiled corn.

Notwithstanding the mass of authentic evidence the fact remains that well-sustained grounds have caused many able investigators to reject all theories based upon it. Aside from the peculiar seasonal incidence which is opposed to an exclusive toxico-chemical idea, one fact has not been harmonized with any of the maize theories.

Most writers of note have credited the reports of cases in which corn products could be excluded as an etiological factor. I have had under observation for some months four cases in the same family, only one of whom ever ate corn products in any form. Before further progress can be made in this discussion it is necessary to set forth that there are two distinct types of pellagra, as regards seasonal incidence, namely, one having a seasonal incidence corresponding to hot seasons, and another type occurring independent of climatic influences. Cases of the last type have not been numerous; yet not a few have come under my observation.

During the past winter no less than four cases with well defined pellagrous symptoms have been observed. Two of these cases have been seen by my colleague, Dr. Gaines. That by far the largest number of cases have a summer incidence is not to be denied, and the development of typical pellagra in a season such as the past winter is not without significance? Can it not be held that this behavior of pellagra shows that the cause of each type, while

related, must differ materially in some respect? The winter cases show that this disease in some instances is uninfluenced by season and in this type the sunlight is not the exciting cause of the dermatitis.

The summer cases show that the disease in many cases is influenced by season and in this type that the sunlight is the exciting cause of the dermatitis.

Going back now to experimental pellagra, which is claimed to be a toxico-chemical disease. It is inconceivable that a poison formed outside of and introduced into the body as such can limit its effects, becoming active only under the influence of the sun in some cases, yet exhibiting the same effects uninfluenced by the sun in others. Going a step further, may it not be concluded that non-seasonal pellagra alone conforms to the behavior of all other toxico-chemical diseases in that they do not exhibit a seasonal incidence?

So much for the peculiar seasonal behavior of the incidence as opposed to the exclusive experimental type and passing to those authentic cases who do not eat spoiled corn products or any other corn products.

Recently there has been an effort made to supply the missing link between pellagra and pellagra. Without regard to the experimental evidence upon which the doctrine of his faith is founded, the author of the first American book on pellagra accepts the suggestion that no one in this day can truthfully say that he has never eaten corn products. As proof of this statement he indicts corn starch, corn whiskey, corn syrup, corn candy and corn breakfast foods. To show that such a suggestion is without warrant, your attention is directed to the process outlined above for obtaining the toxic products. This process excludes the possibility of the suspected agents being present in whiskey, even though they are present in mash. If syrup is made from corn carried to the state of putrefaction, it yet remains to be shown that the poisonous substances are soluble in a mixture of glucose and water.

Dr. C. C. Bass, an able investigator, has had to indict starch in order to connect corn with one of his cases. He states that the patient had for some time eaten a pound of starch a day. It appears reasonable that she must have had pellagrous insanity to have contracted such a habit. Thus it is easier to admit pellagra without corn than to establish the connection.

Nor is it necessary to reject the experimental evidence that agents derived from fermentation or oxidation of oil and albuminous matter of corn does cause pellagra, because some cases of pellagra obtain the same specific poison from another source. Corn has no monopoly on oil or albuminous material, nor is the chemical nature of the oil and albuminous material peculiar to corn. Why, then, should not oils and albuminous materials chemically the same and fermented under the same conditions give rise to the same chemical compounds?

In experimental pellagra the toxic agents are shown to be different from a physical standpoint, but this may be due to different degrees of transformation and not to any marked chemical difference, hence may arise from the same substances and the essential substance seems to be a certain kind of oil. Following up this suggestion, it will be seen that this oil is present in corn to a much greater degree than in any other edible grain or seed, also that the one suspicious constituent of the oil is linolin. After identifying linolin as the peculiar constituent of corn that is necessary for the formation of the pellagra-producing agents, it is easy to conclude that its presence in like proportions in other oils will render them capable of forming pellagra-producing agents under the same conditions. Thus may be identified sesame seed, poppy seed, cotton seed, sunflower seed, and many other seed, also some nuts which furnish food stuffs.

Such a conception removes the objection offered by those cases who have not eaten corn and paves the way for a general acceptance of the experimental evidence. The experimental evidence, however, comprehends only one type of pellagra and this conception of the disease alone is far from satisfactory.

As it is impossible that a chemical poison formed outside of the body can exhibit the peculiar seasonal activity exhibited in the large majority of cases, there remains to be identified a related agent which is capable of exhibiting this seasonal activity.

By studying the experimental evidence and identifying the essential constituent of corn which enters into the formation of the toxico-chemical agent, we may be able to reach a reasonable conclusion as to the cause of the other type of the disease. As before stated, it seems conclusive

that this constituent is the neutral fat, linolin.

A brief reference here to the chemical technology of fats and oils shows that linolin has a very wide distribution in nature and may occur to some extent in animal fat when present in the food of the animal. In contrast with the ordinary animal fats, olein, palmitin and stearin, which are among the most stable constituents in the animal body, linolin is very unstable and readily undergoes fermentation or oxidation. Suppose then that the stable oleyl, palmityl and stearyl compounds of the animal body are replaced by the unstable linolyl compounds. Does it not follow that such animal tissue becomes unstable and that there may be developed in the body a biochemical poison related to the "toxico-chemical" poison of experimental pellagra?

I wish to state that while I do not deny the possibility of a type of the disease corresponding to experimental pellagra, not one case has come under my observation that a satisfactory investigation did not show cotton seed oil consumption. For this reason, I am disposed to believe that the consumption of this class of oils beyond a certain limit is the essential primary factor, and that seasonal influence is the exciting cause in those cases exhibiting a seasonal incidence, while spoiled corn or oil expressed from fermented seed is the exciting cause in those cases uninfluenced by season.

INDUCTION OF LABOR IN PUERPERAL ECLAMPSIA*

T. J. Carswell, Ph.G., M.D., Waycross

By the term puerperal eclampsia we mean an acute morbid condition, making its advent during pregnancy, labor, or the puerperal state, which is characterized by a series of tonic and clonic convulsions, affecting first the voluntary and then the involuntary muscles, accompanied by complete loss of consciousness, ending in sleep, coma, or death.

As to the cause and palliative treatment of this condition, these are too well agreed upon to warrant discussion here.

When one of these eclamptic seizures comes on and the doctor is called in, the question with him is, **HOW CAN**

THE UTERUS BE EMPTIED MOST QUICKLY AND MOST SAFELY? for all obstetricians are pretty well agreed that rapid evacuation of the uterus is the procedure at this stage. To set forth how the uterus can be emptied with safety to the mother and the child, and why this should not be too rapidly done, is the aim of this paper.

In pregnancy and the first stage of labor, the great barrier offered to rapid delivery is the undilated cervix, and it is just here that so many of us differ so widely as to the best plan of procedure. During pregnancy and early labor there are, at present, four recognized methods for quickly emptying the uterus:

1. Caesarean Section (both suprapubic and vaginal).
2. Mechanical dilatation of the cervix, of which there are thousands of methods.
3. Deep incisions which at once completely removes the barrier of the cervix.
4. Combined mechanical dilatation and deep cervical incisions.

These, I say, are the four recognized methods of quickly emptying the uterus, but there is a fifth and very popular method of the present day and time—one not in books, one not recognized by the profession, but one which is practiced daily by men who are in the profession, and one which has caused a more horrible, a more appalling, and more disastrous loss of life than the going down of the Titanic, Monday morning. This method is that of brutally tearing the woman wide open, cervix, lower uterine segment, perineum, yes, sphincter and all. Giving none of the tissues time to relax. Just rip and tear and pry and pull, doing things by main force and awkwardness. Anything, anyway, just to get through before the woman dies, never for one moment considering the child's right to live. This vicious practice of rapid mechanical mutilation of the patient, is in common vogue today, and I am speaking advisedly, for I have looked upon the field of devastation and death following such a storm. A woman lacerated, mangled, bleeding and dying; a helpless child murdered. One life wrecked, another destroyed. And generally it is the young woman who falls a victim to such barbarism. Although the mortality is greater in multiparae, nevertheless, puerperal eclampsia is unfortunately four times more frequent in primiparae.

* Read at meeting of Medical Association of Georgia, Augusta, Ga., April, 1912.

On three occasions have I been called in to arrest hemorrhage and repair lacerations following rapid delivery by this fifth method.

In the first case I found a left lateral laceration of the cervix running away up into the lower uterine segment, with profuse hemorrhage from the uterine artery, and the patient promptly died from exsanguination.

In the second case there was a lacerated perineum, left lateral and posterior lacerations of the cervix, abraded mucous membrane high up in the vault of the vagina with a rupture of the azagosa artery.

In the third there was a lacerated perineum, a stellate laceration of the cervix with a portion of the anterior lip torn away and all the tissues very much traumatized.

I knew also of a case where the patient was taken to the hospital, having had three or four convulsions; she was given a general anesthetic, and rapid mechanical dilatation of the cervix was attempted, but failed, the cervix was then incised and the operator attempted to apply forceps, but was able to introduce only one blade. After working for two hours or more with no progress, hope of delivery at that time was abandoned, the vagina was packed and the woman put to bed, given veratrum and quinine, and nineteen hours later the child came without further aid from the doctor. This patient was aged 21, primiparae, seventh month. Child still-born.

I believe in rapid evacuation of the uterus in eclamptic convulsions, but I do not believe in violent rapidity.

The cervix uteri consists of muscle-fibers, both constricting and dilating, and while it is known that labor is generally induced by the first convulsions, nevertheless the supervening asphyxia has a decided constricting influence upon the body of the uterus and the cervix, which is most definitely exemplified at the internal os. Consequently there will be imminent danger of uterine rupture in any method of rapid manual dilatation of the os undertaken before the internal os has at least partly disappeared. This fact particularly concerns primiparae, in whom the supravaginal portion of the cervix persists late in pregnancy, and even up to the beginning of labor. I am forced to believe that uterine rupture and death have frequently

followed the careless performance of rapid manual dilatation of the os, and undue shock caused by dragging a fetus through an imperfectly dilated os, not to mention the death of the child. In case of placenta praevia, the lower uterine segment and the cervix are made more easily dilatable by the hemorrhage and supervening anemia. The reverse is true in eclampsia.

Although I have the strongest faith in the efficiency of an immediate removal of fetal metabolism and irritation, in order not only to control but to cure the eclamptic attack, I must protest against too rapid and violent dilatation of a rigid and unrelaxing os in primiparae with persistence of the supravaginal part of the cervix, and I wish to offer the following as an easy, efficient, safe and fairly rapid means of inducing labor in such cases as have been mentioned above.

The appliances necessary are: One uterine tenaculum, one soft rubber catheter, gauze, long sponge forcep, Voorhees' hydrostatic bags Nos. 1, 2, 3 and 4, metal syringe and sterile water for distending bag, piece of tape for tying stem of bag.

Without an anesthetic, pull down cervix, pass catheter six to eight inches into uterus between uterine wall and the membranes, then pack gauze tightly around cervix well up into the vault and fornices, give twenty grains of quinine sulph. or bisulphate, wait two and a half or six hours, when the cervix will have softened and all of the tissues will have relaxed; then remove gauze and catheter. Introduce bag No. 1, distend with sterile water, then use gentle traction on bag until it has passed the cervix. Then introduce the next largest size possible. When the largest size has passed the cervix and good dilatation has been obtained, either a version can be done and the child delivered by the breech, or if patient is in fairly good condition and there is a vertex presentation and good pains, give the patient a little time and things will come alright, or the delivery may be expedited by forceps if necessary. I rarely use bag No. 4 in ordinary cases of vertex presentation except in cases of placenta praevia, for fear of displacing the presenting part and favoring prolapse of the cord.

From the above description it is seen that this use of the hydrostatic bag is extraovular, and that the membranes are kept intact until the bag passes the cervix

and good dilatation is obtained. The extraovular method is preferred to the intraovular use of the bag, chiefly in the interest of the child, but with little if any detriment to the mother. If the membranes are ruptured and the dilating bag placed within the amniotic sac, the version, if such should follow, has to be performed in a uterus largely emptied of fluid, with great danger to the child and still greater of rupture of the uterus.

Occasionally we find thick board-like membranes stretched across the internal os, preventing any pressure from above on the bag, thus retarding labor. Such membranes should be ruptured and let the presenting part down against the bag and drive it through the os.

By such a procedure the tissues are given time to relax and a normal labor is approached. In this manner a woman can be delivered without unnecessary laceration and shock and with a reasonable degree of safety to the child.

DISCUSSION ON DR. CARSWELL'S PAPER

Dr. G. R. White, Savannah, said the paper just read was a very timely one, because a great many false statements had been made regarding the subject of eclampsia. It seemed to be the custom to take a young woman when seized with this condition and put her through barbarous procedures, and he believed that they should not be in such a hurry because a wait of a few hours did not, in his opinion, make much difference in the outcome. They all agreed, no doubt, that what the doctor had stated was the best for the average case, the best method to follow. One should not attempt manual dilatation or the use of the various instruments in dilating the cervix; if it was dilated by these means in all probability it would rip, but the dilatation by the ordinary bags was a good procedure and one that should be advised. After the use of the bags delivery would be a normal one in all probability. In many of these cases Caesarean section was called for and this should not cause any fear because there was little trouble, if properly done, and by one who understood the work, and resulted in a saving of both the mother and the child.

Dr. R. L. Miller, Waynesboro, agreed with what had been stated regarding the rapid dilatation of the cervix. He recalled a case he had seen in his early career in the practice of medicine, a lady who was suffering from eclampsia. She was his second wife. His first wife was lost after forceps had been used in order to quickly evacuate the uterus. During the consultation it was recommended that the uterus be at once emptied, but the husband strenuously objected. Therefore veratrum viride was ordered, and other measures were employed, and she was relieved in spite of the fact that she appeared to be in **extremis**. Since this experience he had been rather slow in advising a prompt delivery in these cases of eclampsia. He had great faith in the use of veratrum viride: when given with opium and with the aid of venesection all the cases he had treated had been relieved.

It should be remembered that in so many cases the physician did not keep tab on these women; he always insisted upon having a specimen of urine sent to him every Monday morning, and if he found the least trace of albumen he took her in hand; they then never had any eclampsia. He believed that most of these cases of eclampsia resulted from neglect of the physician and because he did not keep tab on his patients. The rapid evacuation of the uterus by forceps or other means was to be deplored and should never be encouraged.

Dr. T. J. Carswell, Waycross, said that the paper was written because of his work among young women; among these he had seen the tissues torn and mangled. These young people looked for trouble, their people looked for trouble, and the husband looked for trouble, but if one could assure them that everything was going to go along easily and naturally it would reduce the excitement.

When Caesarean section was employed, many did well. When a rapid dilatation of the cervix was performed, the patients were torn; then they were sewn up, but this did not always work out well. In dilating there was too much trauma to the cervix and a great danger of infection. When one was engaged to attend a primipara who had a very rigid cervix he should go very slow and give the tissues plenty of time to relax, using bags if necessary. He might use first a No. 1 bag and later a

No. 3 bag and, in all probability, that would be all that was necessary because the patient could then deliver herself naturally. Gradual dilatation of the cervix by means of hydrostatic bags is the most sane and safe way of inducing labor where rapid delivery is necessary.

MENSTRUATION NORMAL AND ABNORMAL*

J. R. Bromwell Branch, A.B., M.D.

Attending Gynecologist to the Macon Hospital,
Macon, Georgia

It will not be possible within the limits of this short paper to enter into a full and free discussion of the subject, and so we shall confine ourselves to the more interesting features treated from the standpoint of scientific diagnosis and therapeutics. It is more or less difficult for a gynecologist to present to the profession a paper of general interest which has not been already thoroughly threshed out in the literature, and you have doubtless wondered at my temerity in preparing a paper on a subject as old as Eve herself.

Since menstruation is such an every-day affair and since its abnormalities are so common, any effort made to throw new light upon its physiology or offer new weapons to fight its pathology should be encouraged. No claim for originality is made, I merely have gathered some not widely known facts from the literature and some few from personal experience.

In the first place we must look upon normal menstruation not as a local phenomenon, but as a more or less local manifestation of a general metabolic process. The older views as to the physiology of menstruation were based on the "local" theories, viz: The ovulation theory which maintained that menstruation was a direct result of the ripening and rupture of a Graafian follicle is now quite discredited, as is the "freshening" theory, which held that menstruation was a process of freshening or preparation of the uterine cavity for pregnancy. The monthly abortion idea is also untenable since we know menstruation may occur without the presence of a ripe ovum. We know, of course, that the presence of ovarian tissue is necessary

to menstruation, but that of itself isn't sufficient, and so we are compelled to look further for a solution to the problem.

Stevenson, in 1882, advanced the so-called menstrual wave theory, which contended that the metabolic processes in women presented a distinct rhythm gradually increasing in intensity up to the time of the menstrual flow, when they suddenly dropped and reached their lowest point. After this they gradually rose again and attained their maximum intensity just before the next menstrual period, thus indicating that the entire process was under some central control and that neither menstruation nor ovulation was directly dependent upon one another but upon some general and as yet unknown cause. Johnston, Webster, Otto and others accepted these views. Blair Bell, of Liverpool, has recently interested himself in the subject and has come to this conclusion, which I quote from his text-book:

"Everything—every known fact and all the recent experimental work—leads us to the conclusion that we must seek for some general metabolic change to account for menstruation."

Calcium metabolism is concerned in this function which does not commence until the child has grown to puberty and has laid down her bony framework, and only recurs when there are no other claims on the calcium economy of the subject. Whether these views be correct or not, they are probably not the whole truth, for it is extremely probable that the ductless glands, one and all, play an important part in the genital functions and in controlling the calcium metabolism itself. There is direct evidence that this is so in the case of the pituitary body, the thyroid and ovarian glands, and strong presumptive evidence in regard to the adrenals, for the extract of these has recently been shown to influence favorably osteomalacia a disease which was formerly treated by oophorectomy. Mr. Bell has done some very beautiful experimental and clinical work upon which he bases his conclusions, and has devised an instrument called the calcimeter to estimate the calcium content of the blood. He finds that menstruation is a periodic function only in so far as the calcium metabolism is in harmony with this periodicity and that the function is dependent upon the calcium metabolism in all its ramifications. In determining the calcium content, or rather index of a

* Read at meeting of Medical Association of Georgia, Augusta, Ga., April, 1912.

patient's blood a measured quantity is treated with a given solution of oxalic acid and after a dilution with glycerine acetic acid and distilled water, the calcium oxalate crystals are counted on an ordinary blood counting slide. Whether or not the method is quantitatively accurate is unimportant, though we believe it is, for all we want is a relative determination for comparison and this is furnished without doubt.

One can with this apparatus make hourly or daily determination of the calcium index.

Dr. Kelly kindly loaned me his calci-meter and, while the method sounds simple, I've found practically the technique requires considerable practice, even to identifying and counting the crystals, and up to this time am not sufficiently expert to draw valuable conclusions from the little work I have done with it.

It is necessary that we go rather thoroughly into the physiology of normal menstruation before taking up its various abnormalities, for it is just here that we have been so woefully lacking in the past. We have treated the various menstrual disorders symptomatically and empirically without getting at the real cause, and so in many cases our treatment has been unsatisfactory to the patient and to ourselves. Especially has this been so in those cases with apparently normal pelvic organs, and as a considerable proportion, 75% according to Teilhaber, of the sufferers of dysmenorrhea belong to this class, our attention is naturally drawn in this direction.

What, then, is menstruation? and upon what does it depend? Menstruation is a phenomenon occurring during the reproductive life in woman, whose most obvious sign is the periodic discharge of blood from the uterus.

Until recently it was thought to be a phenomenon peculiar to the human race. We now know that "rut," or heat, of the mammalian females is comparable to human menstruation, and much has been learned in regard to the nature of this function.

In this region menstruation begins between the ages of twelve and fifteen years, at the period known as puberty. At this time certain general changes take place in the girl, both in regard to her mental and physical characteristics, which are quite familiar to all of us. While some meta-

bolic processes are producing these wonderful changes in character and disposition others equally remarkable are producing changes in the bodily structure.

Exactly what these metabolic changes are producing such wonderful results is not as yet known. It is clear, however, that the ductless glands are all more or less involved, the thyroid, being the only one capable of observation, has long attracted our attention by its enlargement before and during menstruation. From experimental work carried out by Bell and others it is quite probable that the calcium metabolism under direction of the ovaries and other ductless glands is also concerned in the phenomenon of menstruation. In addition to the activity of these ductless glands in order to have normal menstruation we must have a good state of bodily health and sound pelvic organs. Any derangement of these necessary factors, if severe enough, will produce the various menstrual disorders, which we are now in a position to consider intelligently. A careful complete history and a thorough physical examination of course being required in every case. In regard to the examination let us protest against the vaginal examination of young virgins unless a general anaesthetic is used.

It is not necessary to detail the various forms of menstrual disorders for they are given in all the modern text-books on gynecology. Suffice it to say that a considerable percentage of amenorrhea, menorrhagia and dysmenorrhea is due to general rather than local causes. Consequently in order to institute rational treatment we must, if possible, make an accurate diagnosis. This is by no means easy and will call into play our most acute diagnostic powers. In many cases we have to experiment to see whether or not the condition is due to hypo or hyper thyroidism, pituitary or adrenal derangements, or ovarian deficiency, or disturbance in calcium, or iron metabolism. When we begin to realize that dysmenorrhea, amenorrhea, etc., are symptoms, not diseases, we are on the right track and shall cease to content ourselves with using the usual anti-spasmodics and anodynes except as a last resort.

Among these newer therapeutic agents at our disposal may be mentioned calcium salts, chloride grains 10 t. i. d. or lactate in the same or even larger doses. Thyroid extract, grains 1 to 3, t. i. d. Infundibular extract, 1 c. c. m. hypo, etc., etc. Just

how these grandular extracts act is not well known, probably through their effect upon the vaso motor system, involuntary muscle, and also upon general body metabolism. In an article on dysmenorrhea, published in *The Journal of the Medical Association of Georgia*, December, 1911, I reported two cases of dysmenorrhea, one with hyperthyroidism treated with calcium lactate grains 10 t. i. d., with complete relief of her symptoms. Owing to the associated symptoms of hyperthyroidism a partial thyroidectomy was done. I have just learned that since her operation, despite the continued calcium treatment, her dysmenorrhea has returned. It is quite probable that she needs thyroid extract in addition to the calcium until her metabolism adjusts itself, and at her next period I shall try it.

Several other cases since the reading of my paper have been verbally reported to me, where complete relief followed the use of calcium after other drugs had failed. Another case was relieved by one grain doses of thyroid extract given thrice daily. She had also been through the mill of suspension operation and the usual anodynes without help.

Of course those cases depending upon pelvic lesions should be surgically treated according to the condition found, and they will not be considered here.

To summarize:

1. Menstruation is a general, not a local phenomenon.

2. It is dependent upon a good state of bodily health, activity of the ductless glands, and normal pelvic organs.

3. Any derangement of these necessary factors if sufficiently severe may give rise to menstrual abnormalities.

4. In a large majority of menstrual disorders no demonstrable pelvic lesion can be found.

5. In the treatment of many forms we may give relief by the judicious use of the calcium salts and the various glandular extracts after securing a good state of general bodily health.

REFERENCES

- Stevenson. On the Menstrual Wave. *American Journal of Obstetrics*; Vol. XV, 1882.
 Johnston. The Menstrual Organ. *British Gynec. Journal*, 1886; page 292.
 Bell. Principles of Gynecology. Longmans & Co., 1910.
 Bell. Observations on the Physiology of the Female Genital Organs. *British Medical Journal*, February-March, 1909.
 Theilhaber. *Central Blatt of Gynak.* 25.
 Branch. Dysmenorrhea. *Journal Medical Association of Georgia*, December, 1911.

DISCUSSION ON DR. BRANCH'S PAPER

Dr. E. Bates Block, Atlanta, said that this was a subject of great general interest and while he was not a gynecologist, he was very much interested from the nervous standpoint, and he was very glad to hear that the subject was treated as a systemic affair and not as a local occurrence. There certainly was a difference in the nervous stability of women and this was a very interesting matter; many of them became emotional, hysterical, cried a great deal, and these hysterical symptoms became more manifest at a certain time, and many alterations took place in the nervous system and in its stability at the time of the menses.

Dr. Block was very much interested in the association of the ductless glands with the occurrence of the menses. Just before the menses there occurred a slight enlargement and induration of the breasts. In many instances the breasts became enlarged and only subsided when menstruation ceased. At the same time there was a marked alteration in the secretion of the sweat glands; there was an increase in the secretion of these glands at the time of the appearance of the menses. There was also a tendency for the hands to have the so-called "cold sweat" from perspiration and the accompanying evaporation, and this was more marked in the nervous woman than in others.

Dr. J. W. Palmer, Ailey, said that the paper just read was a very able one and was very instructive. Many of the cases he met with were abnormal, and at an institution with which he was connected from fifty to seventy-five per cent. (50-75%) of the students missed their monthly periods, many of them not having menstruated for six months or over, a condition which worried them very much. There was hardly a week but that he was in contact with such a case. In many of these the condition could be told by the general appearance, but no treatment was instituted until a very careful examination was made for hookworm, and it was found that in fifty per cent. (50%) of these cases the patients were afflicted with hookworm disease. When they were given the proper treatment it was found that they did not require anything else. He reported the case of a girl, twenty years of age, to

whom all possible drugs were employed without avail for eighteen months. A very careful examination was made and the hookworm was found; thymol was administered and within a short time her menses became regular. This was rather an interesting case, because it demonstrated the effect of the hookworm disease on the menses, and in handling these cases we must not lose sight of the hookworm.

Dr. E. C. Cartledge, Atlanta, said that the different suggestions thrown out by the various speakers were very correlative. In what had been stated regarding the secretion of the thyroid, it should be borne in mind that the thyroid gland secretion is a galactagogue. This was one of the remedies employed in cases of suppressed menstruation, also in dysmenorrhoea. The suggestions contained in the paper were quite suggestive. Only one day before, he had a patient who had not menstruated for eleven or twelve months, a patient who was very stout. When thyroid extract was administered to her, her menses immediately returned and she was greatly improved.

So it appears that the thyroid extract has a selective effect upon each of the family of the generative organs in women. We remember that the diseases of thyroid are much more frequent in women. We remember a few years ago when trial was made to see if ovariectomy would arrest a cancer of the breast.

Dr. W. B. Hardman, Commerce, wished to make mention of two or three points. The condition of a trained nurse did not differ from that of any young lady going to a boarding school; she had menstrual functions disordered, amenorrhoea, and so forth. The girls in the boarding schools very frequently stopped menstruating and the nurses in the training schools did the same. This appeared to be the result of the change in their mode of living, their diet, their habits, their environment, and the resulting nervous strain to which they were subjected. They were not accustomed to this change of things. The use of thyroid extracts certainly did well in selected cases.

Dr. J. L. Campbell, Atlanta, asked why do women suffer from so many intestinal disturbances during menstruation, and also why are young women, when they first start to earn a living, so frequently

troubled, and for so many months, with suppressed menstruation. This was one of the most important things they had to deal with at the Wesley Memorial Hospital Training School. Nearly all the nurses suffered from suppressed menses during the first few months of service after entering the training school. Dr. Campbell asked for an explanation.

Dr. J. R. B. Branch, Macon, closed the discussion. He said that he did not know just why abdominal distention should take place, but, in all probability, this was a reflex phenomenon. There was a certain relationship between the mammary gland and menstrual conditions. He recently read an article in the German literature in which much was stated in regard to the relationship of rupture of the Graaffian follicles and menstruation and which was very interesting. During the past month in three cases he waited until the menstrual period was over before he performed a laparotomy and he found absolutely no evidences of any recent rupture of the Graaffian follicles. There was very little in the literature regarding this subject.

The form of calcium he used in many of these cases was the lactate and because it was more often advised in the literature. If one used the thyroid treatment, the patient must be watched very carefully; he had very severe symptoms when only two grains of the extract, given three times a day, was administered. Calcium should be commenced one week before menstruation was expected and then continued one week after it was over, giving as much as ten (10) grains three times a day; some gave thirty (30) grains of the calcium salt (lactate) at night. There were some patients that apparently required both the calcium salt and the thyroid extract and they seemed to get along nicely. Dr. Branch referred to a young woman he now had under his care; she was eighteen (18) years of age and undersized and was given calcium; the results of his treatment he said he would report later, because it was now too early to make any definite report.

The more money The Journal of the Medical Association of Georgia makes out of its advertisements the less it costs the State Association to run the paper. This means that every member of the State

Association has an interest in the advertising columns. If one business firm advertises and another does not, patronize the one that does. It is money in your pocket.

INTESTINAL RESECTION IN STRANGULATED INGUINAL HERNIA, WITH REPORT OF CASES*

W. Whatley Battey, Jr., M.D., Augusta

A hernia becomes strangulated when it becomes so tightly constricted that there is a marked alteration in the blood supply to the part involved, causing gangrene and sloughing. This constriction may be at internal or external ring, or both. Omental strangulation is less likely to happen than intestinal strangulation, owing to the abundant blood supply and the presence of fatty tissue which protects the vascular supply, and the absence of peristalsis which is the property of the bowel. Incarceration of omentum may exist for years without producing alarming symptoms, and it is usually the inclusion of intestine, which narrows the opening, causing the strangulation.

In bowel strangulation, if the mesentery be not strangulated or if only a portion of the mesentery be strangulated, the prognosis is better in a given case. It is not necessary that the mesentery be tightly constricted in order that the blood supply to bowel be impaired. The simple dragging on the mesentery by the altered position of the bowel produces mesenteric infarction and consequent impoverished bowel blood supply when, if not reduced early, will lead to gangrene of bowel, if there be sufficient constriction at distal and proximal bowel ends to alter circulation in bowel coats.

The peritoneal coat of bowel is quite resistant to pressure and we observe that sloughing of the bowel begins in mucus and muscular coats. The peritoneal coat may be intact at point of constriction and one is led to believe from external appearances that bowel is healthy and resection unnecessary, but by fingering bowel at point of constriction we note division of mucus and muscular coats and the peritoneal coat remains intact as an

anemic ring around bowel at constricted point.

The symptoms directing our attention to the strangulation are as follows: A patient who has a hernia is attacked with pain in and about hernia and with pain in region of umbilicus simulating colic. This pain becomes more and more frequent until finally the pain may become continuous. The hernia is found to be irreducible, larger than usual, tender, painful, dull on percussion without impulse on coughing and the skin above it may be reddened. Frequent eructations of gas occur and generally uncontrollable vomiting and prostration come on. There may be considerable retching and vomiting when fluids are taken, though vomiting may be a late symptom and may begin after 24 or 48 hours. The initial vomiting is said to be of reflex origin. The later due to a reverse peristalsis, the vomiting consisting of bile and food matter. One point that we notice particularly is the gradually increasing prostration hourly until collapse occurs. The temperature may be slightly elevated early in the case, but soon becomes normal or subnormal. The pulse becomes quick and thready; the patient's face assumes an anxious look and extremities become cold.

When strangulation occurs, constipation becomes absolute, though there may be some discharge from lower bowel. With the colicky pain there is frequently a desire to have a bowel movement without results. The tongue becomes dry and urine scanty. Thirst is marked. As gangrene of bowel begins the symptoms may abate and one is led to believe that there may be a slight improvement, but on the contrary the end is near at hand. The scene is soon closed by constant hiccoughs, irregular pulse regurgitation of stomach contents, delirium and death.

The treatment of strangulated hernia is mainly operation. Unfortunately we cannot always get immediate consent and too often do we have to operate on late cases. For my part I am opposed to any method other than operation. The method of taxis is to be employed only when operation is flatly refused and the dangers of same should be thoroughly gone over with the patient and family.

The technique of operation is well known. I would lay stress upon the following points. Divide external ring before sac is opened. Do not make any at-

* Read at meeting of Medical Association of Georgia, Augusta, Ga., April, 1912.

tempt to reduce contents of sac before sac is thoroughly irrigated with salt solution. Do not cut fibers of conjoined tendon, of oblique and transversalis in order to reduce contents of sac. If the index finger of both hands be placed within the sac, the internal ring can be separated sufficiently wide to allow an easy reduction and we eliminate the possibility of injuring the deep epigastric artery.

In cases where resection is necessary, I believe it a wise plan to introduce small drainage through one angle of incision to accomplish a double purpose. First, we are likely to have an abscess due to bacillus coli communis infection. Secondly, the stitch line in bowel may become infected laying bare the possibility of fecal fistula, which the tube or drainage will take care of. One may argue that by introducing drainage we are unable to close wound thoroughly and bring about a cure of the hernia. It is true it may weaken the wall somewhat, but not half so much as secondary opening of incision to secure drainage. Instead of introducing drainage through angle of wound, the fibers of internal oblique and transversalis can be separated about one-half to one inch above point of apposition with poupart's ligament and drainage introduced at this location. A counter incision can be made in skin.

A word in regard to method of resection. I personally prefer lateral anastomosis in all cases in which it can be employed. Of course every case is a law unto itself, and we must use the method which seems to be the easiest of performance. While in Mayo Clinics I saw lateral anastomosis employed in all cases where its easy performance was possible. The various textbooks on surgery give an elaborate description of the various methods, which are too well known to discuss.

The following cases I report in detail:

(1) Resection of eight inches small intestine. Lateral anastomosis. Recovery.

Willie Fulton, Union Point. Referred by Dr. H. C. Foster.

Age, 25 years.

Family history, negative.

Past History—Has a congenital left inguinal hernia, which has been reducible up to present time.

Present History—Five days ago was taken with pain in groin. Hernia became irreducible. Nausea and vomiting. Abdomen tense and slightly distended. Large tumor mass in groin, painful upon palpa-

tion. Pulse frequent and small. Dr. Foster saw patient only on day that he sent him to hospital.

Immediate operation, assisted by Dr. Bernard and staff. General anaesthesia by Dr. Battey, Sr. General anaesthesia was used owing to the fact that extensive resection was thought to be necessary. Upon opening sac, sero-sanguinous fluid fecal matter and gangrenous bowel were found, the bowel having sloughed through at one point. Sac was thoroughly irrigated with salt solution before traction was made on bowel to develop healthy bowel. Gangrenous bowel divided and resected between clamps. Drainage introduced in angle of incision. Bassini technique. Patient reacted well. With exception of some pressure necrosis of skin had no trouble and left hospital in three weeks.

Mrs. T. J. M., Dearing, Ga. Referred by Dr. Rodgers.

Age, 58.

Family History—Father killed in battle. Mother died of bowel obstruction, most likely strangulated hernia.

Past History—Left inguinal hernia for 19 years. Has been irreducible for same period.

Present History—Was taken with la grippe three weeks ago. Cough severe and paroxysmal. While coughing felt something give way in left side. The tumor became very much larger. Doctor was called, who was forced, under existing circumstances, to try taxis without results. Two days later began vomiting. The vomitus soon became fecal. Unable to retain liquids. Bowels constipated. No movement in four days.

Physical Findings—Patient fairly well nourished. Expression anxious. Tongue dry and temperature normal. Pulse 100. Abdomen distended. Large tumor mass in left groin, painful upon pressure. Skin slightly reddened over tumor.

Patient was sent to hospital on first train available and operated upon about 60 hours after symptoms began.

The sac contained six inches of gangrenous omentum and twelve inches of gangrenous bowel. Resection of omentum and bowel. Lateral anastomosis, using Roosevelt clamp. Bassini technique. Patient did well for eight days, when mass was discovered at operative site. Temperature 101; pulse 90. Angle of wound opened but no pus to be found. The mass

was decidedly tympanitic upon percussion. I suspected infection and probably a fecal fistula. Patient was given chloroform. Incision opened and fibers of oblique internus and transversalis wall divided one inch above apposition with Poupart's Ligament, where union seemed to be perfect. As soon as peritonem was opened gas and pus escaped in quantities. Drainage inserted. Fecal fistula did not occur. Patient left hospital in four weeks perfectly healed and at this time in perfect health.

DISCUSSION ON DR. BATTEY'S PAPER

Dr. James N. Ellis, Atlanta, referred to the choice of anaesthetics in these cases. As a general proposition he believes local anaesthesia desirable in all inguinal herniotomies and it is exceptional for him to deviate from this rule. In operation for strangulated hernia this preference, in his opinion, becomes obligatory. These cases come to the surgeon as emergency operations, without previous preparation for a general anaesthetic. Regurgitant vomiting of stomach contents and feces, with consequent inspiration pneumonia or suffocation on the table from inspiration of vomitus, is a not infrequent incident of general anaesthesia and contributes materially to the high mortality, approximately 20 per cent. of this operation.

This element of danger is completely eliminated by local anaesthesia, the patient being conscious and helpful in clearing the pharynx of adventitious material. When the gut is found to be gangrenous, and resection seems essential, it is much safer to restrict your intervention to relief of the constriction, the formation of a temporary inguinal anus and, subsequently, at your leisure, to do such intestinal anastomotic work as may be necessary.

Dr. J. R. B. Branch, Macon, emphasized the importance of an early diagnosis in these cases; many surgeons were very much discouraged in their work when the patients were sent to them three or four days after the onset of symptoms, which was quite unnecessary. The physician in attendance would try calomel, then employ taxis without result and then as a last resort he would send the patient to the surgeon, this was not fair to the sur-

geon and it certainly was not fair to the patient. When the physician made the diagnosis, by delay he took up the patient's time and the patient's money and, when he had failed to relieve the condition, the patient was sent to the surgeon. In some instances the patient would not be satisfied with the surgeon to whom he was sent and would seek another surgeon and thus delay in the work ensued.

With regard to the treatment, if one could not treat the patient the way he wished, the patient should then be turned over to somebody else; one could not abide by the whims of the patient, but should do what seemed to be the best for the patient.

Dr. Branch agreed with what had been said in regard to anastomosis; the Murphy button had been used much, but he believed that a lateral anastomosis in these cases was better and safer.

In regard to judging the vitality of a piece of intestine, if it was black or purplish place it in a hot saline solution and then wait and see whether or not it regained its color. A better method, however, was the following: Mark the location of the strangulation with a piece of tape; then place it back in the peritoneal cavity, where it really belonged, and let it stay there for a reasonable amount of time; if the circulation had not been restored, then go ahead and do what was necessary.

Dr. Floyd W. McRae, Atlanta, believed that the term "taxis" should be eliminated from the literature on surgery, especially when it concerned strangulated hernia. Taxis, as employed, was in such cases dangerous, devilish and unsurgical.

The only thing that he had heard in the discussion with which he wished to take issue was regarding the use of taxis when the family would not consent to have an operation done. Then it was up to the family and no responsibility could be placed on the physician or surgeon. **Dr. McRae** had had many cases where taxis had been practiced. He recalled one man in particular who had an undescended testicle and a strangulated hernia, which had existed for twenty-four (24) hours, and two very strong physicians had practiced taxis with the patient under chloroform; they practiced taxis with the patient under chloroform until they had pushed the strangulated hernia and the

undescended testicle outside the transversalis fascia, where the gut died a few hours later. All this was because of the taxis employed and it was not the result of the surgery. When one dropped the intestine back into its normal surroundings, in the peritoneal cavity, prompter return of evacuation would occur, but in those cases of acute intestinal obstruction, where the patient was poisoned and moribund because of the absorption of the poison produced in the intestine, then it was better to establish an artificial anus.

Dr. McRae did not like doing the operation called for under cocaine anaesthesia. Under general anaesthesia one could go ahead and complete the work required; more efficient work could be done with the patient under nitrous and oxygen gas, or under ether, than could be under local anaesthesia, especially in those cases of strangulated hernia where they had as a rule to deal with an inflamed gut. It was a question whether in these cases a lateral or an end-to-end anastomosis was the better procedure.

Dr. T. J. McArthur, Cordele, said he wished to discuss but one feature. There are so many people suffering from hernia and but a small percentage apply to the surgeon to have it corrected, and we make a great mistake in not placing the responsibility up to these people and in not urging the importance of operative procedure for their relief. He thought it was justifiable in practically all these cases to refer them to the surgeon whether the hernia was strangulated or not. By referring them to the surgeon many lives would be saved.

Dr. E. C. Cartledge, Atlanta, believed that if any surgeon got these cases early they would employ taxis. He reported one case in which he was called at 11 p. m. and operated at 1 a. m. In this case, however, he first used taxis. The patient was given chloroform and was stood on his head; he used taxis and he also depended upon gravity to help put the bowel back where it belonged. In these cases one should decide quickly what he thought to be the best for his patient. These patients rarely failed to send for a medical man; if the physician failed to immediately reduce the bowel, later it would be harder to reduce; if it could not be reduced at once one should send for a man to operate.

Dr. J. L. Campbell, Atlanta, called attention to the danger when volvulus complicated a strangulated hernia, and he reported an instance in which, after relieving the strangulated gut, he noticed a portion of gut above it that was very dark. After a very careful examination he found there was a volvulus, together with a band of adhesions which so contracted the lumen of the gut that this band had to be broken up in order to get a sufficient blood supply. Dr. Miller, of Pittsburgh, had reported two cases in which volvulus complicated a strangulated hernia, and one of these he lost. In the other relieving the volvulus saved the patient's life.

Dr. Campbell did not believe there was any greater danger in the use of general anaesthesia than there was in the use of local anaesthesia, especially when it was given by the careful men they had in Atlanta. Of course the operation could be done under a local anaesthesia, but he believed that general anaesthesia was safer.

He had had very little experience with resection of the gut in these cases, but he believed that a lateral anastomosis gave better results and was by far the best scheme to employ.

Dr. W. W. Battey, Jr., Augusta, closed the discussion. He said one could not operate upon these cases of strangulated hernia with local anaesthesia without a certain amount of pain ensuing, and he had written a paper several years ago in which he brought this out with emphasis. Dr. Meltzer, of New York, had demonstrated the fact that if one introduced cocaine in any part of the body, a certain anaesthesia was produced in the intestinal coats if the intestines were not distended with gas; if there were any distension with gas anaesthesia would not take place. However, in selected cases he employed local anaesthesia in treating these cases of hernia that were not strangulated; if they were strangulated satisfactory results could not be obtained, as a rule, unless a general anaesthetic was employed. There appeared pain, nausea, vomiting and other discomforting features when the mesentery was pulled upon when local anaesthesia was employed. Taking all in all he said he was opposed to the use of local anaesthesia in these cases of strangulated hernia and he preferred the use of general anaesthesia.

With regard to the vitality of the gut,

as suggested by Dr. McRae, who entered into discussion, it was wise to return it to the peritoneal cavity in order to determine whether or not its vitality was good; a gut that was grayish should always be looked upon with suspicion.

With regard to Dr. Davidson's remarks, Dr. Battey believed that every general practitioner when called to see a case of strangulated hernia should at once refer the case to a surgeon. Reduction by taxis is very uncertain. The injury to intestine and omentum, the result of repeated efforts to reduce, may be of a serious nature.

The hernial sac may contain intestine or omentum, or both. In the effort to reduce, one or the other may slip back into the cavity and the ring contract tightly on the remaining mass, be it intestine or omentum.

Again they might meet with an incarceration which would be very unfortunate. Only three days ago he had operated upon a strangulated femoral hernia after the attending physician had employed taxis, and failed to reduce the hernia. Because of the taxis, the parts about the hernia had become swollen and were made considerably larger. The patient was sent to the hospital, where it was found that the intestine had been reduced, but the omentum, which filled the hernia as well, had not been reduced. There was a sac about three, four or five inches and the omentum was tightly strangulated and there were present multiple infarctions of the omentum.

**RADICAL SURGERY IN CASES OF
CANCER-ORIS OR "NOME", WITH
REPORT OF A CASE OF BI-LAT-
ERAL INFECTION COMPLICAT-
ING TYPHOID FEVER WITH
RECOVERY***

Baxter S. Moore, M.D., Atlanta
John S. Clifford, M.D., Charlotte, N. C.

Only until recent years were the surgical complications arising during a typhoid attack given the consideration that is their due and it remained for Keen, in his excellent monograph upon this subject, to call the attention of the profession to the

manifold conditions that bring the surgeon to the bedside of the typhoid patient.

Gangrene, while comparatively rare, is an interesting complication and in the 133 cases collected from the literature by Keen there were nine cases of Noma, five of these terminated fatally; in one case the final result was not recorded. The single case of both cheeks being involved, originally reported by Littlejohn, ended in death.

Most of the text-books dwell but lightly upon this subject, simply stating that it is a progressive gangrenous process beginning on the mucous membrane of the cheek or gums and spreading rapidly to the cutaneous surface. It is usually observed in children between the ages of three and eight, complicating some acute infectious fever, more often measles than any other, and is less common where proper attention is paid to hygiene. The pathology is not well worked out as the disease is so rapid that limited time for study is afforded. In our case a positive Widal was reported and no doubt the bacillus of Eberth was the principal invading organism. We regret that no culture was taken. The treatment, however, is well defined and the only efficient measure to pursue is the total destruction of the tissues involved by the actual cautery even extending well into the surrounding healthy tissues, seemingly without any regard for the cosmetic results. As in the case reported herein one application is rarely sufficient, but as the slightest evidence of involvement of any new areas recourse must be had to the thermo cautery.

We report the following case because of the interesting fact that it was a bi-lateral infection, and also on account of the invasion of the superior maxilla; on the right side the antrum was entered, while on the left side the alveolar processes of two molar teeth were destroyed. It is also interesting to note that on the right side the orifice of Stenson's duct was obliterated, yet there was no involvement of glandular tissue.

Report of Case—M. C., aged 8; family history, negative; youngest child of widowed mother who lived in a mill settlement; had been ill at home with typhoid fever for three weeks. Was sent into the Mercy Hospital by Dr. McManaway August 13, 1910, with a temperature of 103.4,

* Read at meeting of Medical Association of Georgia, Augusta, Ga., April, 1912.

pulse 163, respiration 30, and for several days previous to admission had had involuntary evacuations from both the bladder and rectum. The child was semi-conscious and showed a great lack of proper care, there being absolutely no attention paid to her personal cleanliness. The patient came under our observation August 19th and, upon examination, a well-defined gangrenous area was seen on the right cheek, which was said to have appeared as a small reddish blue spot, five days previous. The patient was at once placed under ether anaesthesia and the infected area treated with the curett actual cautery, two molar teeth, which were loose, were extracted and their alveolar processes came out with them. It was then observed that the antrum was involved. This was curetted, packed with gauze saturated in alcohol and the patient returned to bed. The dressings were renewed every three hours and the proper nourishment and stimulation administered. The patient reacted nicely, the temperature came down and there was no incontinence of either urine or feces. On August 22d it was necessary to apply the cautery to the edges of the wound, the antrum gave no trouble and the patient commenced to complain of the pain following the change of the dressings, which were soaked in alcohol. On August 25th at 6 p. m. a small reddish area, about the size of a five-cent piece was observed on the left cheek, and immediately the cheek was incised down to and through the orbicularis muscle, the actual cautery was applied to the edges of this wound and two molar teeth, which were loose, extracted, and the alveolar processes, as on the right side, were removed. The patient emerged from the anaesthetic very delirious, and this condition persisted for five days. There was a marked rise in temperature 104.4, pulse 180, with great prostration. On August 29th, and again on September 4th, it was necessary to apply the cautery to the sloughing edges of the wound on the right side of the cheek. The temperature remained high, with daily remissions from one to two and one-half degrees until September 11th, when a well-marked curve of defervescence began until normal was maintained from October 6th. The wound on the left cheek healed rapidly, the fibres of the orbicularis oris were joined practically by primary union, the destruction on the right side was sufficient

to restrict the movement of the lower jaw, due to a marked retraction of the remaining mucous membrane. The patient was sent home November 20, 1910, and her mother promised to have her return to the hospital in six months, in order to correct as much as possible the deformity on the right side. The child gained in weight rapidly and was sent to school in the spring of 1911. When last seen, October, 1911, the child could open her mouth about one-half an inch, and her mother refused to have her submit to the plastic operation necessary to further increase the movement of the inferior maxilla.

The successful outcome of this rare and interesting case is, in a large measure, due to the unremitting care she received at the hands of the Sisters in charge of the Mery Hospital. For over three months this child was utterly dependent upon their charity. She received the very best treatment, no expense was spared, even a special nurse was always available, and it would be ill-becoming the writers if they did not at this time publicly acknowledge this fact.

WANTED

The Medical Association wishes to employ an organizer to devote his entire time to calling on the doctors of the State, soliciting their membership in the Association. Traveling expenses, salary and a commission will be paid an acceptable man.

Only members of the Association need apply.

Address,

W. C. LYLE,

Secretary Medical Association
of Georgia, Augusta, Ga.

THE JOURNAL OF THE MEDICAL ASSOCIATION OF GEORGIA.

300-302-304 Harison Bldg.

SUBSCRIPTION

PRICE.....ONE DOLLAR PER YEAR

SINGLE COPIES of this calendar year, 15 cents; of the previous calendar year, also 15 cents; two years old, 20 cents; three years old, 25 cents; in other words, 5 cents additional is charged for each year preceding the last calendar year.

REMITTANCES should be made by check, draft, registered letter, money or express order. **Cur-ency should not be sent unless the letter is registered.** Stamps in amounts under one dollar are acceptable.

CHANGE OF ADDRESS notice should give both the old and the new address, and state whether the change is **permanent or temporary.** The change notice must reach us **ten days** in advance of the date of the issue which is to be forwarded to the new address.

WARNING: Pay no money to an agent unless he presents a letter showing authority for making collection.

ADVERTISEMENTS.

Advertising forms go to press eight days in advance of the date of issue. In sending in copy time must be allowed for setting up advertisements and for sending proofs. No proprietary medicines can be advertised until approved by the Council. Advertising rates will be sent on request.

CONTRIBUTIONS.

EXCLUSIVE PUBLICATION: Articles are accepted for publication on condition that they are contributed solely to this journal.

CONTRIBUTIONS TYPEWRITTEN. Authors should have their contributions typewritten—**double-space and with ample margin**—before submitting them. The expense is small to the author—the satisfaction is great to the editor and printer. We can not promise to return unused manuscript, but try to do so in every instance. Manuscript should not be rolled or folded.

ILLUSTRATIONS: Half-tones and zinc etchings will be furnished by THE JOURNAL when satisfactory photographs or drawings are supplied by the author. Each illustration, table, etc., should bear the author's name on the back. Photographs should be clear and distinct; drawings should be made in black ink on white paper. While we cannot guarantee to return used photographs and drawings, we use our best endeavors to do so after the article is published, if the word "return" is written on the back of each.

ANONYMOUS CONTRIBUTIONS, whether for publications, for information, or in the way of criticism are consigned to the wastebasket unread.

NEWS: Our readers are requested to send us items of news of a medical nature, also **marked** copies of local newspapers containing matters of interest to physicians. We shall be glad to know the name of the sender in every instance.

SOME WORK FOR YOU TO DO

In our last issue there appeared in this space a report of the aye and nay vote of the members of the House of Representatives on the Medical Practice Bill. We urge that you preserve that particular issue in order that you may know how your representatives voted and be in a position to talk to them concerning the merits of this bill. It will be introduced early in the next session of the General Assembly, and if we work for its passage it will unquestionably become a law.

It is of so much importance to the entire medical profession that no man can afford to be indifferent concerning it. The medical laws of Georgia were enacted fourteen years ago, and remains practically unchanged today, while the advances that have been made in medical science and education during that time have been marvelous.

The present law only requires that a student shall attend a medical college for three terms of six months each, while it is well known that no college in Georgia gives a course of instruction of less than four terms of seven months each.

This one defect above prevents the offer of reciprocity with adjoining States requiring a higher standard than the law provides for our Board of Medical Examiners. A physician in Georgia who wishes to practice in an adjoining State must stand a State board examination in that particular State before he is eligible to practice there, as they do not recognize the examinations of our board, though the local examinations are more rigid than those required in other States, and the licentiates of our State are fully able to pass all the requirements of other State boards, but our law is defective. Nine States in the Union will not even permit a majority of our physicians to come before their respective boards.

Our State is rapidly becoming the "dumping ground" for all manner of quacks and charlatans and we are doing nothing to prevent such a state of affairs. Your representatives would, in almost every case, be more than willing to vote for this bill if the necessity for such a measure could be made plain to them. They are not in a position to fully understand the needs of the medical profession, nor of the public generally, concerning matters of health policy, but it is your duty to enlighten them. Will you promise yourself that you will read this bill which was published in the August Journal, and inform yourself of its merits, and then inform your representatives of them?

The League of Medical Freedom, which is the representative of the patent medicine interests, will spend thousands of dollars to defeat this measure, and will succeed unless the members of the organized profession put their shoulders to the wheel and help in the fight.

The officers of the Association will write hundreds of letters to members of the next

Legislature, but they cannot accomplish one-half so much as the doctors, who are the family physicians of the members.

We are now making an appeal to you. Are you the family physician of a representative or senator, do you know one intimately, or have you influence with one?

IF SO SEE HIM AND WRITE THE SECRETARY OF THE ASSOCIATION IF HE WILL SUPPORT THIS BILL. DON'T BE SELFISH! DO SOMETHING FOR THE PROFESSION AT LARGE.

SOCIETY NOTES

EIGHTH DISTRICT MEDICAL SOCIETY

The following is the program that was carried out at the Eighth District Medical Society's meeting, held at Covington, September 25, 1912:

Convention opened by prayer at 10 a. m.

Address of Welcome, Mayor Smith.

Response, Dr. J. R. Robbins, Siloam.

Address of President, Dr. J. T. Wills, Washington.

Address, Dr. W. W. Pilcher, President Medical Association of Georgia.

Address, Dr. W. C. Lyle, Secretary and Treasurer Medical Association of Georgia.

"Prevention of Disease," Dr. W. B. Travis, Covington.

"Colles Fracture," Dr. W. B. Hardeman, Chairman Board of Councilors.

Adjournment for dinner, 1 p. m.

Afternoon Session

"Tuberculosis, Diphtheria and the Microscope," Dr. W. W. Brown, Health Officer of Athens.

"Headache," Dr. A. C. Holliday, Athens.

Dr. T. B. Rice (subject announced).

"Obstruction of the Bowels," Dr. S. W. Whiteside, Lavonia.

"Smallpox," Dr. W. G. Hulme, Elberton.

"Maxillary Synovitis," Dr. J. C. Bloomfield, Athens.

"The Relations Between Physicians and Pharmacists," R. H. Wilson, Ph.G., Professor of Pharmacy, University of Georgia.

"The Use of Iodine in Surgery," Dr. I. H. Goss, Athens.

"Railway Surgery," Dr. S. Revaud Benedict, Athens.

"The Necessity of Healthy Mouths in the Treatment and Prevention of Diseases," Dr. N. G. Slaughter, Athens.

NINTH DISTRICT MEDICAL SOCIETY

The Ninth District Medical Society met at Alto, September 18th. The meeting was held in the main building of the State Tuberculosis Sanatorium. Dr. V. D. Lockhart, of Maysville, is president, and Dr. L. C. Allen, of Heshlton, vice-president. After attending to some routine business matters the scientific program was taken up.

"Tonsils and Adenoids and Their Relation to Tuberculosis," was the subject presented by Dr. W. B. Hardman, and was filled with pithy points of practical importance on this vast subject.

"The Treatment of Pneumonia" was well presented by Dr. B. W. Lockhart.

"A Plea for the Early Use of Forceps or Other Operative Measures in Protracted Cases of Labor" was the subject of an article by Dr. V. D. Lockhart, that was logical and timely.

These papers were freely discussed and brought out many points that will prove helpful to those present.

Dr. Wm. V. Parramour, superintendent of the sanatorium, then carried the society through all the buildings and over the grounds and demonstrated the work being done. A most excellent dinner was given the society by Drs. Davis and Parramour. A vote of thanks was given them for their many courtesies and the work of the sanatorium was most heartily endorsed.

Next meeting, in March, 1913, will be at Oakwood.

A. D. WHITE, Sec.

SURGICAL DISEASES OF THE ABDOMEN AND UTERUS COMPLICATING PREGNANCY

Dr. Maurice H. Richardson, Boston: A pregnancy threatened by surgical conditions within the uterus should not be interrupted unless it is clear that pregnancy cannot possibly go on. For pregnancy to be allowed to continue it must appear that the life of the child is practically safe while the danger to the mother is slight.

TUBERCULOSIS

C. H. RICHARDSON, M.D.
Montezuma

T. E. OERTEL, M.D.
Augusta

J. H. HAMMOND, M.D.
LaFayette

PROGNOSIS AND TREATMENT OF TUBERCULOSIS OF THE LARYNX

W. Freudenthal (The Laryngoscope, July, 1912, Vol. XXII, No. 7, page 971) reviews the subject of laryngeal tuberculosis and sounds a note of cheer and encouragement for the sufferer from this malady and his medical attendant.

"As late," says the writer, "as 1880 and 1881 Krishaber, of Paris, pronounced the absolute incurability of laryngeal tuberculosis and the medical world rested under the shadow of that pessimistic view up to the time when Herman Krause, of Berlin, published his observations, with lactic acid, and Heryng, of Warsaw, his results with curetment of the larynx." He thinks the general practitioner especially still clings to the dictum of Krishaber, and considers the condition hopeless. He points out that the cure of pulmonary lesion is of first importance in all cases of laryngeal involvement, and that removal of lesions above the larynx is also of great importance. He says: "We know that such a little thing as a post-nasal catarrh may keep up an irritating cough which will not let an ulcer in the larynx get well."

He urges careful examination of the chest in all cases of laryngeal inflammation that may be tubercular but in which diagnosis is uncertain. Often in such cases the attendant will be surprised by a sudden and rapidly progressing pulmonary lesion which early diagnosis and proper treatment might have prevented. It is the consensus of opinion of the foremost laryngologists that "with modern methods of treating laryngeal tuberculosis the outlook is far better than it was twenty years ago." He advises diligent search for the cause of cough in order to relieve this symptom and thus remove the constant irritation of the larynx.

"Cocaine for dysphagia is decidedly contra-indicated. An analgesia not an anesthesia is the thing desired. This can best be produced by the proper use of

orthoform, anesthesin, or propesin. Injection of alcohol about the superior laryngeal nerve is often of great benefit." Fulguration has been of service in his hands. The high frequency spark is applied directly to the laryngeal ulcer for several applications of a few seconds at each sitting.

"The benefits of this new method seem to be manifold. First, there is a mild caustic effect that destroys the ulcer (or infiltration). Second, one need not be so careful as with the galvano-cautery in trying to hit a certain point which occasionally is difficult. Although I always direct the sparks towards the affected spot, I am well aware that they spread all over the larynx. Third, another advantage is the antiseptic effect of the ozone produced by the current. Fourth, the ease of administration makes it also preferable to other methods. Five, there is no danger of an edema of the larynx, as happens occasionally after the use of the galvano-cautery. A reaction sets in, but it is never of such a character as to produce dyspnoea."

T. E. O.

TUBERCULOSIS

In the current number of the Journal of Outdoor Life there is a timely editorial on Tuberculosis Day. It would seem that certain of the clergy have been complaining that the churches are so overburdened with special days that there is no room for this new one on which it is designed to preach the gospel of health. The writer has heard extended apologies by the pastor for the introduction into his pulpit of an alien who would speak to the people upon so mundane a subject as tuberculosis.

The attitude of the church is, too often, one of complaisant superiority which will not permit of contact with anything that disturbs the serenity of routine practices, forgetting the while that Christ healed the sick on the Sabbath day—and one may incidentally remark—was condemned for

it. It would not be amiss to corner the reverend gentlemen of your community and read to them the editorial which follows in its entirety.

Perhaps they then may listen to your appeal to be allowed a few moments on October 27th in which to lay before the congregation some salient facts, which may or may not be altogether to their liking, for some of them are not too flattering.

"Tuberculosis Day

"October 27th has been designated by the National Association for the Study and Prevention of Tuberculosis as 'Tuberculosis Day', and on that date and the days immediately preceding and following it every effort will be made to secure the co-operation of the churches of the country in presenting the anti-tuberculosis campaign to their congregations.

"To meet the real grievance of the churchman that the ecclesiastical year is already overburdened with special 'days' of all kinds, Tuberculosis Day has been given an elastic character. If an individual minister objects for any reason whatever to presenting the subject of tuberculosis before his congregation on Saturday or Sunday, October 26th and 27th, he may do so on some other day, either during the week preceding or the week following. Tuberculosis Day is not an attempt to infringe on any of the church calendars. It is rather an earnest effort to engage the interest of every church and congregation in this, one of the most vital problems that knocks at the pastor's study door.

"Tuberculosis cannot be overlooked by the clergyman. One-tenth of all the funerals at which he is called to officiate come from this disease. Out of every congregation of 500, one person each year will die of tuberculosis. On his visiting-list of the sick, how terrible the frequency with which consumption occurs! Who are the families for which the relief funds of the church are most needed? Are they not for those where the bread-winner has been laid low by tuberculosis? It is not entirely with the plea of charity and humanity that the anti-tuberculosis society asks the aid of the church in this campaign. It is also with the argument of self-protection.

It is of little use to preach to dead people, but a church, which follows the example of its Founder by raising the dead

through preventing and curing tuberculosis, has extended its gospel a hundred-fold. Why should the church wait to be led in a movement of this character? Why should she not rather point the way? These are questions which any minister or church worker will do well to ask himself."—*Journal of Outdoor Life*, September, 1912.

While the above editorial would make the date of Tuberculosis Day an elastic one in order to compromise with the prejudices of the clergy, one should not lose sight of the fact that the **Sunday** congregation is the largest and, therefore, the most desirable to reach. Special services of a week-day do not draw well. The habit of church-going on a Sunday is an inherited one and as it is our endeavor to reach as many ears as possible the Sunday service is the elective one. On this day, too, the Sunday School is to be reached and it is always easier to teach the child than his more mature and settled parent, who wants no new doctrine, whether religious or secular, the ways of his forebears being quite good enough for him.

For these reasons it is well to be not too easily put off with a week-day meeting at which there will be present three women and the sexton to listen to your words of wisdom and take issue with them in their self-satisfied and not too well-informed minds.

New ground is the most fertile and, when once the stumps are dug up, the most satisfactory to cultivate. T. E. O.

WANTED

The Medical Association wishes to employ an organizer to devote his entire time to calling on the doctors of the State, soliciting their membership in the Association. Traveling expenses, salary and a commission will be paid an acceptable man.

Only members of the Association need apply.

Address,


W. C. LYLE,
Secretary Medical Association
of Georgia, Augusta, Ga.

PEDIATRICS

W. Z. HOLLIDAY, M.D.
Atlanta

W. A. MULHERIN, M.D.
Augusta

M. A. CLARK, M.D.
Macon

 Remember that approximately one-fourth of all deaths occur in the first year of life. A good reason for concerted action by the Medical Association of Georgia along pediatric lines.

CAN WE PREVENT THE "BOTTLE-FED BABY"?*

Samuel A. Visanska, Ph.G., M.D.

Pediatrist to Georgian Hospital; Visiting Physician to
Home for Incurables, etc., Atlanta, Ga.

The physician of today possesses many advantages over the physician of even a decade or so ago. Much of the force of modern science is today directed toward the aid of the medical man. Millions of dollars are being spent annually in furnishing the sinews of war with which we may do battle against disease, retard death, and increase the efficiency and lengthen the span of human life.

But above and beyond even the power to combat ill health is the growing power to preserve good health. The physician today is realizing, perhaps as never before in the annals of medicine, that in very truth "an ounce of prevention is worth a pound of cure," and it is on the value of preventive rather than on remedial measures, as they touch the whole vast subject of human welfare, that I would speak to you today.

Scientists and philanthropists alike have recognized the value of prophylactic treatment as a race boon, and we note with pleasure the recent establishment of a million-dollar preventorium for tuberculous children, as well as the increase of hygienic devices all directed toward preventing minor diseases.

But underlying the prevention of actual disease there is a more insistent call to the true physician—a call so imperative that its echoes resound from the very beginning of human life itself. Even the modern

science of eugenics, dealing as it does with the actual generation of human life, with its recently appointed college professors and its growing circle of students and disciples, does not hear nor heed this voiceless plea. What matter all precautions taken in the generation of life; what matter, even parental health, if, when a new life begins its long struggle against disease, its battle for the "survival of the fittest," it is permitted to do so unguided by parental wisdom; when infants are denied the ample and adequate food which Dame Nature herself, that wisest of all mothers, has provided for them, and are thus deprived of the chance of beginning life equipped with any measure of health or strength? Whether the cause be worldly influences or merely gross ignorance is immaterial, it is a fact that of all barbarous customs, of all uncivilized methods which our sometimes over-civilized modern life permits and even countenances, that of the bottle-fed baby is without any doubt or question the most barbarous and the most uncivilized. Indeed, the only parallel to this which we can find in ancient history is the infant sacrifices to the god Moloch, who demanded fresh child's flesh as a daily diet!

It has often occurred to me, as I handled the emaciated and starved form of an unnecessarily bottle-fed baby, that if our own government ever could become really paternalistic in a literal and helpful sense, that here indeed was a case where its interference might well be directed against a voluntary "slaughter of the innocents."

I ask you, my fellow practitioners, if you have, in all sincerity, given this subject sufficient thought? Have you been professor as well as physician to the young mother during the first months of her first pregnancy? Have you patiently taught her

* Read before the Medical Association of Georgia, at Augusta, April 19, 1912. Reprinted, by permission, from International Clinics, J. B. Lippincott Co.

the grave importance to herself, to her child and to the human race itself, of being prepared to give her offspring nourishment from the only safe and sure source which we have ever known? Truly, the fountain of life is in the breast of the mother and yet how often does some trivial consideration cause her voluntarily to shut off this God-given supply?

I am willing to admit that it is often done in ignorance; in innumerable cases the young mother does not recognize the danger; she hears of all the "fine foods" on the market and she hears, too, of the loss of time and comfort to herself or, as I heard a young mother say recently, of her own "slavery" if she nurses her baby. And hearing all this, like Eve of old, she is tempted. She tries the advertised goods, and in an incredibly short time the baby, born healthy, is a wasted little wreck, with all its natural physical powers blighted, and if life itself be granted to it, its whole future is clouded by the shadows of that fight against actual starvation which attended the first months of its miserable little existence.

Of course this does not apply in the most remote way to those unfortunate mothers who would gladly nurse their babies but, for some uncontrollable physical reason, are unable to do so. This brings us to the question as to what causes are "uncontrollable" and we naturally inquire to what extent can the physician overcome ordinary obstacles to normal breast feeding? I have been carefully investigating these conditions and I find that from a pathological viewpoint the prospective mother should carefully consider her own health from the first moment she recognizes her condition. Of course, there is the social side of the question to be carefully considered. No physician wishes to consign a young mother to social seclusion, or to a neglect of her simple social duties and pleasures during the early months of pregnancy, or during the months of nursing her baby. On the contrary, rational and reasonable pleasures are to be desired, but these should be taken in moderation and with due regard to the grave responsibilities which the future will bring forth.

Yet is it not an undeniable fact that undue social excitement, too much exposure of the neck and chest, as dictated by the modern evening dress, too much taxing of the nerves, the digestion and even of the brain itself—all conspire to prevent the

highest efficiency in the prospective, as well as in the nursing mother? Here, too, we might counsel the young man desiring normal offspring to consider well his choice of a wife, and if possible to select for a life partner one who seems sensible enough and unselfish enough to be willing to consider the welfare of those other lives which may emanate from their own.

Naturally there are a myriad of substitutes for mother's milk, but I shall broadly assert that there is not a single one of them which will permit an infant to begin life with the same physical equipment as that which flows to it from the normal breast of a normal mother. On the contrary, most of the baby foods now on the market are actually deficient in those qualities which support life, and are laden with scurvy and rickets.

Statistics have proven that over 20 per cent. of the children born into the world die from improper feeding, which causes a long train of gastro-intestinal diseases. I have proved this many times in my own personal experience, and I cannot too strongly urge the need of enlisting all classes and all persons interested in the welfare of humanity to unite with us in the prevention of the bottle-fed baby. Ministers, doctors, nurses and women's clubs throughout the country might well combine to make this a common cause. I would urge that lectures be given on the subject wherever possible, and that even the omnipresent moving picture machine be enlisted in this campaign against the bottle-fed baby; in fact, anything and everything that tends toward educational methods along this line must have the heartiest endorsement and co-operation of medical men and of the public generally.

As a Southern physician I have observed that most negroes have a very ample milk supply; this would seem to prove the theory that a sunny, cheerful temperament, a simple and wholesome life all combine to create ideal conditions for milk producing. During the old days of slavery, when the negroes were carefully guarded by their owners, because of their actual value, almost every mother was able to nourish at least two babies at the same time, so freely did she produce milk, and good milk, too. Today, almost without exception, the negro woman nurses her own child and she places great stress on the value of her food supply, too.

Now, do we, in all sincerity and honesty

consider the question of encouraging lacteal health as one of the main considerations in the care of the prospective mother? I feel certain, myself, that many of us really overlook this, and I realize, too, that it is a delicate subject for many reasons.

It has no doubt come to your notice as it has to mine, that at the present time, Nature has failed to care for herself by not enabling the majority of nursing mothers adequately to take care of their offspring. Each case, therefore, must be given individual study, in order to prevent the trouble from occurring at all or to relieve it when it does occur despite our efforts. First, we must remember that in the pregnant woman every organ is under high tension, and the first discord, either physical or mental, is liable to play havoc with the milk secretions. As I have said, most women select a physician soon after conception occurs, and it should be one of our first duties to urge all our patients to choose a competent obstetrician who will direct her to an easy labor and an adequate milk supply. In order to accomplish this the care should be given during the first and not during the last months of pregnancy, and the pregnant woman should be given the most careful examination, with especial attention to the blood, heart, kidneys and nervous system.

I lay special stress on the blood examination at this stage for the reason that a great many women are anaemic, and I consider anaemia one of the principal etiological factors in preventing normal milk secretions, and thus necessitating the bottled baby. It is true that the pregnant woman takes on flesh, but sometimes this is at the expense of the blood supply to the foetus. Even the blood of the so-called fat woman is often found deficient in haemoglobin, and while such women might even have large and bulging breasts, their milk supply is usually deficient.

But it is right here that we should begin our struggle to induce a normal milk supply and to aid Nature in producing a normal infant. With a good foundation of proper hygiene, suitable food, requisite amount of exercise and rest, together with a tonic containing iron, we can in most instances avoid what I have termed the "stuffing process" so often resorted to to induce milk after the child is born. When the milk of a young mother is found lacking in quantity and quality the usual routine is to order teas, meats, milk, broth,

cocoa, potatoes, etc., the order being generally "to take all you can hold." Can we reasonably expect Nature to do in a few days what it would take weeks to accomplish? Granted, on the other hand, that the milk comes normally on the third day; what often takes place even then? The mother is able to produce enough milk for her baby for a few weeks only and soon requires assistance.

This subject is at last being given profound attention by scientists, and experiments are constantly being made to prove on what lactation really depends. Quite recently Miss Lane Claypon, Professor Starling, and Ott and H. Scott, of Philadelphia, have all announced certain theories as to the growth of the mammary glands during pregnancy, and what affects the secretions of these glands. Mackenzie, too, has declared that pituitary extract is most active in promoting these secretions, etc. While all of these theories and experiments are of profound interest, I do not think any of them have been extensive enough to prove conclusively that a nervous element is not largely responsible for a deficient milk supply. In fact, I am sure that in many cases a strong psychological force can be brought to bear on the mother, which is entirely independent of physiological conditions. Such cases as those just mentioned need all possible encouragement, and while making consistent efforts to find out why the mother's milk supply is deficient, the physician should never fail at the same time to give every mental suggestion in his power in order to make the mother believe that she will be able to nurse her child, instead of, as in many instances, declaring that this will not be possible, and then end by ordering one of the many artificial foods. A thorough examination should again be made, especially of the milk itself, in order to ascertain whether it is deficient in fats or proteids, and if so, proper diet and exercise to improve the condition, should be prescribed. Sometimes, too, it may be necessary to relieve the mother a little by placing the baby on one or two bottles a day, but at the same time the mother should be given careful hygienic treatment, her surroundings kept as pleasant as possible, as by these methods, as well as by judicious tonic treatment, the milk can often be brought back to the normal. I have often found that nutrolactis is a great help in cases of this kind. Sometimes, too, a

change of air and scene for the mother will do more good than medicinal tonics, although I cannot lay too great stress on the actual remedial value to be found in constant encouragement on the part of the physician. The patient relies on the verdict of her doctor, and to be assured that "her milk will certainly come freely" often results in bringing about that very condition, per the action of the sympathetic nervous system.

One factor in a deficient milk supply which is not usually given sufficient consideration is caused by permitting a patient to undergo too long and too tedious a labor, which can often be avoided by instrumental delivery; therefore every physician should be skilled in this art and be supplied with the necessary equipment. Again, too liberal use of an anaesthetic might have a tendency to delay the milk flow, therefore, your assistant who administers the anaesthetic must have a thorough knowledge of the exact amount needed. Then, too, post-partum hemorrhage requires prompt and skilful care and attention; lacerations should be repaired at once, as they serve to put a subsequent drain on the system, and every feature of the labor which makes a special tax on the patient's vitality should be carefully avoided if for no other reason than its influence on the milk supply.

There is another feature, too, which I cannot emphasize too strongly in reviewing the situation concerning normal healthy children—the employment of a thoroughly competent nurse, and one trained for obstetrical work. It is a deplorable fact that the majority of nurses lack this special training, and while it is obviously true that the average physician cannot possibly give the necessary time and attention which every obstetrical case demands, it is equally true that the nurse in such cases should be almost a medical assistant as well. This is particularly so in cases where Nature requires assistance; and while the majority of physicians may leave too much to the nurse, it is equally true that the majority of nurses have no conception of the gravity of their responsibilities in an obstetrical case, and absolutely no knowledge of what is best to do for emergencies that constantly arise, and which must be met promptly and intelligently, often before the physician himself can be communicated with. A nurse should thoroughly understand everything

connected with the care of the breasts, for delay in applying the proper remedies at the proper time may often result in losing the milk secretions altogether.

Just because a mother nursed her first baby normally is no reason why she will be able to do the same with a second one, and vice versa, so it is well to keep a careful record of every case which is handled.

I think many medical colleges fail to give sufficient training as to the care of the woman before and during pregnancy, and training schools for nurses are often lacking in the same way. Such training should cover a thorough understanding of the physiology and anatomy of the mammary glands as well as of the entire body, and every physician should be able to make a scientific examination of the mother's milk in order that he may detect wherein it is lacking and supply the lack by directing proper diet; he must also see to it that his directions are faithfully carried out.

Then, too, more attention should be given to the care of the breasts themselves before and after the birth of the child. Oni, in treating the question of sore nipples, said that one out of every two women was affected in this way. If, after careful examination, the nipples are found to be small, flat, and not to protrude sufficiently, gentle manipulation, pulling the nipples outward, should be practiced and a lotion, not too astringent, should be applied. If this should fail to produce proper development of the nipples then a breast pump should be used, and I have found the Yale pump the best. It works on the same principle as a bicycle pump and succeeds in doing just what you want in the way of elongating the nipples. If you will notice the breasts of your patients carefully you will observe that near the base of the nipples and upon the surface of the alveoli are numerous sebaceous glands which become much enlarged during lactation, and present the appearance of small tubercles beneath the skin. These glands seem to secrete a peculiar fatty substance which serves as a sort of protection to the integument of the nipple during the act of sucking, therefore when this is absent you have a condition of what might be termed "dry sucking"; the nipples often become macerated, fissures occur and bacteria gain entrance into the deeper tissues, causing mastitis and sometimes suppuration. Should this occur, a harmless oily sub-

stance (olive oil or cocoa butter) may be applied by being rubbed on before each nursing, and after the nursing an astringent antiseptic solution should be applied; if fissures should occur a solution composed of the following ingredients should be used:

R. Pulveris alumenis ----- 3i
 Glyc. acidi tannici ----- 3iv
 Liquor antiseptici ----- 3iii
 Liquor calcis ----- q.s.Oi

Shake.

M. Sig.—Apply to nipples after each nursing.

After the last nursing of the day, when the breasts rest for several hours, at least, it is well to apply an ointment consisting of

R. Balsam Peru ----- 3i
 Ung. zinci oxidi.
 Lanolin aa ----- 3iv

M. Sig.—As above.

Should mastitis occur and pus be formed surgical treatment should be given without delay.

Both nurse and physician should have a thorough knowledge of breast massage and should know when to use it, as this is perhaps the one sure way of relieving what is known as "caking of the breasts," which is not only one of the most painful of ills connected with breast feeding, but which also leads to most serious complications.

From all of this we will see that to prevent the bottle-fed baby we must combat conditions which precede the life of the infant on earth and which should really begin with the first dawn of that life from the moment of generation. Indeed, the bottle-fed baby is but the stepping-stone to the badly fed baby, and we all know that this means the sick, the weak, the emaciated and the unnatural baby.

But were I to speak with "the tongue of men and angels" I could not plead too earnestly with you, my fellow physicians, to unite with me and with every other physician with whom you come in contact, in teaching the mother the vital need of natural nourishment for her offspring, and then in doing everything in your professional power to make her physically fit to give this nourishment, and enable her to keep its supply unstinted during the months it is needed for the very life of her child.

Much can be accomplished toward this end by diplomatic means; much by in-

struction, encouragement, and assistance, and so great is my personal faith in our American women that I believe the majority of them, our efforts once made, will co-operate with us in recognizing that it means health, strength, power and even life itself to the helpless spark of immortality which owes its heritage of earth as well as its hopes of heaven to the mother who gave it birth.

FINKELSTEIN MILK

Wm. A. Mulherin, M.D.

The introduction to the medical profession, especially to the pediatrician, of Finkelstein milk in the treatment and feeding of various digestive derangements in infancy, I consider the most important contribution to pediatric literature since the Georgia State Medical Society met last year. Therefore my reason for presenting this subject to you.

Finkelstein and Meyer, two German scientists, after careful study, scientific work and clinical experimentation, have advanced facts diametrically opposed to our (American) long cherished ideas. Formerly, we believed that the caseinogen, or curds, of cow's milk was the most offending ingredient of our cow milk modifications. Therefore, in our percentage feeding of infants, we feared proteids, and kept them necessarily low; thinking that fermentation with resulting colic and digestive disturbances was caused thereby. Finkelstein and Meyer claim that curds are not only non-fermentative, but are anti-fermentative; therefore, not injurious, but helpful. Again, we were strong in our belief that sugar was the most easily digested and least harmful of the three chief ingredients of cow's milk, fats, sugars and proteids. In consequence, we temporarily gave aqueous solutions of sugar of milk or whey (high in sugar percentage) mixtures, purposely to avoid the proteids and fats, in cases where digestion was upset. Finkelstein and Meyer tell us that sugar is the main causative factor in producing fermentation, and that fermentation is at the bottom of the majority, if not all, digestive disorders of infancy.

So iconoclastic is the teaching of Finkelstein and Meyer that a brief resume of their writings might prove of value. Fin-

kelstein and Meyer claim: The differences in the digestibility and availability of human and cow's milk by infants, are not due to qualitative differences in the constituents of the milk. Casein causes no disturbances of digestion. Fat and sugar have no pathologic action unless the intestinal functions have been injured. The fat and sugar of human milk can act in the same way, if the injury to the intestine is severe enough. The action of the whey from human and from cow's milk is, however, different. A baby can digest the various food elements when they are in the human whey, but cannot when they are in the whey of cow's milk. Any other medium than human milk interferes with the functioning of the intestinal epithelium. They have, however, in spite of many experiments, been unable to find a better menstrum than the whey of cow's milk.

They believe that the diarrhoeal diseases of infancy originate in a functional weakness of the intestines, and that this functional weakness is kept up and increased by fermentation. This being so, the first step in treatment is to stop the fermentation and in this way give the intestine an opportunity to repair itself. This has been done in the past by cutting down the amount of food, and by giving foods insusceptible to fermentation. This method is sufficient in many cases; in others, however, fermentation continues even when the caloric needs are not covered. In such cases the only resource in the past has been human milk.

Fat, sugar, and protein are all susceptible to decomposition. The medium in which they are contained, that is, the whey, may also play a part in the decomposition. Czerny and others have attributed the chief role in fermentation to fat, but Finkelstein and Meyer conclude from their experiments, in which they obtained the same results in these cases with diluted whole milk as they did with diluted skimmed milk and buttermilk, that the fermentation is not due to fat. They also found that the addition of a freshly prepared casein to skimmed milk and to dilutions of whole milk, which babies with indigestion were taking, not only did not make babies worse, but, apparently improved them. The thin acid green stools changed in a few days to typical light colored and dry soap stools. They conclude, therefore, that casein has an anti-fermentative action and is harmless. Milk

sugar must, therefore, by exclusion be the cause of the fermentation. They found that the addition of milk sugar to the food of babies whose diarrhoea was controlled by the addition of casein, resulted in the recurrence of the abnormal stools. The long continued diminution of the carbohydrates in the food also relieved the symptoms, even if the casein was not increased. They adduce as further evidence that the primary cause of fermentation lies in the sugars and not in the fats, the fact that when babies having fatty diarrhoea were given the same amounts of casein and fat in various saline, sugar free solutions, instead of in the sugar holding whey, the fatty diarrhoea ceased. Milk diluted with water was, moreover, better borne than milk diluted with whey.

They sum up as follows: Sugar is the special and primary cause of fermentation. Neither normal nor abnormal acidification can take place without it. The fat is never involved primarily. It is injurious in that it causes an acid fermentation. The fermentation of the sugar is dependent on two main factors—first, the concentration of the whey, more or less work being thrown on the intestinal epithelium according to whether the concentration is more or less suitable for the intestine; second, the relative proportion of casein sugar in the mixture. Here, therefore, as always in matters of nutrition, when considering the chemistry of the intestine, it must be remembered that it is impossible to judge of the action of one element alone, and that the final result depends on the relative proportions of the various organic and inorganic elements of the food.

They conclude, therefore, that the principles on which the preparation of a food to combat intestinal fermentation depend, are: a diminution in the quantity of milk sugar, a diminution of the salts through dilution of the whey, and an increase in the casein, with varying, and under certain circumstances, not inconsiderable amounts of fats. After improvement has begun, an easily assimilable and consequently little fermentable carbohydrate should be added. They consequently developed a food to meet these indications, to which they gave the name "Eiweissmilch." Frequently called "Finkelstein Milk," "curd milk," "casein milk," "protein milk". This food is prepared as follows:

Finkelstein or Eiweissmilch

Heat one quart of whole milk to 100 F. Add four teaspoonfuls of essence of pepsin and stir. Let the mixture stand at 100 F. until the curd has formed. Put the mass in a linen cloth and strain off the whey from the curd. Remove the curd from the linen cloth and press it through a rather fine sieve two or three times by means of a wooden mallet or spoon. Add one pint of water to the curd during this process. The mixture should now look like milk and the precipitate must be very finely divided. Add one pint of buttermilk to this mixture.

Finkelstein and Meyer use buttermilk in the preparation of this food for the following reasons: First, because of the small amount of milk sugar it contains; second, to obtain the good effects of the lactic acid; and third, because buttermilk can be kept for a long time. The composition of this food is:

Fats	2.5 per cent
Sugar	1.5 per cent
Proteids	3.0 per cent
Salts	0.5 per cent

One quart of this milk contains about three hundred and seventy calories.

They used this food in a great variety of conditions accompanied by diarrhoea, such as dyspepsia, decomposition, intoxication, and parenteral infections, and, in their original paper, claimed good results in all, but not in the new born.

The general principles laid down by them for the use of this food in these conditions are as follows: A preliminary catharsis, if necessary, followed or not by an initial period of starvation and tea diet, as the case may be; small amounts of casein milk; larger amounts of casein milk, the addition of some carbohydrate, other than milk sugar, or can sugar, preferably some dextrinized preparation of malt sugar. They claim that the loose green stools are quickly replaced by typical soap stools and that the addition of malt sugar does not cause a recurrence of the symptoms of fermentation. They call attention to the fact that on account of the low nutritive value of the food there is certain to be a loss of weight in the beginning of the treatment. This is followed by a stationary period, then, when the amount of food is increased and carbohydrates added, by an increase in weight.

They found that babies could be kept on this food for months, and continue to thrive.

Finkelstein and Meyer state in a later paper that this method of treatment is worthy of employment in the disturbances of nutrition in infants which are accompanied by diarrhoea, no matter of what sort or severity. In their latest paper on the "technique and indications for feeding with Eiweissmilch" they are evidently endeavoring to meet criticisms which have been made of their method of feeding. In this paper they claim perfect results, and say that the bad results obtained by others are due to imperfect technic or to a bad choice of cases.

They warn against too long delay in the addition of carbohydrates, especially in feeble children, and against giving up treatment, withdrawing the carbohydrates, and diminishing the quantity of food, if symptoms recur. They claim, too, that casein milk must not be combined with any other mixture, not even with human milk.

From personal experience in the use of Finkelstein milk, in private practice, and during my service at the Children's Hospital, "The Wilhenford", I feel reasonably certain that this method of treatment of intestinal disturbances associated with fermentation in infancy has certain decidedly good advantages. Briefly enumerated they are: First, a positively good effect in quickly stopping fermentation in the bowels; second, a shortening of time of starvation diet, that heretofore was necessarily in vogue—the plan I have found most advantageous in such cases has been, colon irrigation, castor oil catharsis, barley water for first twenty-four hours, then the use of Finkelstein milk, as advised by the authors. Third, easier digestibility of the finely divided precipitated casein than the natural milk proteins—probably due to the mechanical effect of more finely dividing the casein by rubbing through a fine sieve.

Fully recognizing the fact that it is easier to criticize than to originate, my observations have led me to the following deductions, concerning disadvantages: First, as a permanent feeding it is a failure. My little patients have necessarily lost weight in the first few days of treatment, on account of the low caloric value of the food. After the sugar percentage had been raised to 5 per cent. by the addition of dextrinized maltose (Malted Milk

or Mellins Food), they remained stationary in weight. When the sugar percentage was further raised to 7 per cent. they began increasing in weight. This increase in weight continued for a varying length of time, from three to six weeks, then came to a permanent standstill. My practice, at present, is to change them to percentage feeding or milk modification, as soon as fermentation has ceased and the weight chart shows no further gain. Second, not infrequently when increasing the food to cover the caloric values, as advised by Finkelstein and Meyer, vomiting is excited. Third, difficulty in its proper preparation usually requiring a physician or a trained nurse's attention in order to be properly made.

WHY THE PEDIATRICIANS OF OUR STATE SHOULD ORGANIZE

Clarence A. Rhodes, M.D., Atlanta

No branch of medicine has been so neglected by our medical schools as that of pediatrics, and it is surprising to see how little attention is given to the study of diseases of infancy and childhood by our general practitioners.

We contend that pediatrics is a specialty, and as such should receive more attention from the profession and laity. True, not a specialty in the sense that ophthalmology and otology are regarded as specialties, because they have reference to special organs of the body; but in the broader sense that pediatrics deals with all the organs of the body, but limited to the periods of infancy and childhood. For most part diseases occur in all periods of life, but with manifestations vastly different in the child than in the adult.

It must be conceded that nutrition, dietetics and treatment in infancy and childhood, is peculiarly a special study, inseparably united with the broad subjects comprised under the heads of hygiene, sanitation, sociology, economics, humanitarian, philanthropic and individualistic, each of these factors must be realized and reckoned with.

We venture to say, that no branch of medicine has made greater strides in recent years than pediatrics, investigators the world over are devoting their time and

talents in this fertile field of research, and our views on nutrition and infant feeding are being revolutionized year by year.

A few years ago we were taught that the fats were the offending agent in infant feeding, later the proteids come in for their full share of the blame, and more recently Finkelstein's views that the carbohydrates are the culprits, and at the present the salts are being given a strong position as an offender.

The digestive functions of the gastrointestinal tract in infants have been investigated and found not wanting, all the digestive juices and ferments common in the adult are found to be present in the infant.

The members of our profession who are most interested in this field of work should organize, and keep these advancements before the profession, and teach the laity the latest methods of caring for their children. The general public and the general practitioner of medicine are sorely in need of advanced knowledge of child life. The dissemination of such knowledge so that these two classes may utilize the truth for the benefit of all, is the fundamental function of such an organization; also the study of the problem of infant mortality and to popularize a knowledge of infant hygiene and of the means for the protection of child life.

More than a quarter of a million infants died in the United States last year, and the responsibility rests upon us for the safety of the millions who remain. There is no duty of more vital importance or obligation upon society more urgent than the rescue from suffering and impending death of infants who are in danger through parental and professional ignorance of the means for their safety.

Economic and social problems should claim a large share of our attention. We should make investigations and gather data and obtain facts concerning the causes of defectives, dependents, sickness, suffering and mortality. The infant in its innocence and absolute dependency has violated no law of life, and it ought not to die. If, as most men believe, its early death is largely due to ignorance, then the responsibility is ours, and it is incumbent upon us to find the means to protect it, and the writer can conceive of no better plan than to form a State Pediatric Society for the study of these problems.

1203-1204 Fourth National Bank Bldg.

RATES FOR REPRINTS

100.....	\$1.00 per page
200.....	1.25 per page
500.....	1.50 per page
1000.....	2.00 per page

Covers to count as four pages when ordered.

The Journal is owned and published by the Association, and all profit goes to make it better. Each member of the Association is financially interested in the Journal to the same extent as every other member, and each member is rightfully anxious for the financial success of the publication.

The greater this financial success, the greater the practical value can be made to the individual member, and hence the greater the value as an advertising medium.

Our advertisers, by their patronage, help to support the Journal, and make its successful publication possible. In return they expect, and rightfully, a fair return for their money. Every dollar spent by a member of the Medical Association of Georgia with advertisers in our Journal, in preference to non-advertisers, is a dollar spent in advancing his own personal advantage, for he has contributed something indirectly to the betterment of his own property.

The Journal cannot exist without the advertisers and their good will.

The advertisers cannot continue in business without the patronage of the medical profession.

The medical man cannot continue in business without the supplies for sale by the Advertisers.

The interests of all are identical—the profession must depend upon the manufacturers, etc. The manufacturers, drug houses, etc, must depend upon the more progressive and more successful physicians. The interests of both are best served through the official Medical Journal—the Journal published by the profession in its own best interests, scientifically and ethically.

ADVERTISING RATES

1	Page 1 year.....	\$150.00
$\frac{1}{2}$	" 1 "	87.50
$\frac{1}{4}$	" 1 "	50.00
$\frac{1}{8}$	" 1 "	33.00
$\frac{1}{16}$	" 1 "	25.00
1	Page 6 months.....	87.50
$\frac{1}{2}$	" 6 "	50.00
$\frac{1}{4}$	" 6 "	33.00
$\frac{1}{8}$	" 6 "	25.00
$\frac{1}{16}$	" 6 "	20.00
1	Page 3 Months.....	50.00
$\frac{1}{2}$	" 3 "	33.00
$\frac{1}{4}$	" 3 "	15.00
$\frac{1}{8}$	" 3 "	10.00
1	Page 1 month.....	25.00
$\frac{1}{2}$	" 1 "	15.00
$\frac{1}{4}$	" 1 "	10.00
$\frac{1}{8}$	" 1 "	7.50

These rates do not apply to cover pages, space next to reading matter, or matter requiring to be reset.

Antitoxin that justifies your confidence

OUR Concentrated Antidiphtheric Serum (Globulin) is evolved in the blood of healthy, vigorous horses—horses that are carefully selected, and that have been pronounced sound by expert veterinarians. It is perfected in laboratories that afford unequalled facilities for serum production—laboratories in which it is possible to observe, at every step of the process, the vital principles of asepsis. It is exhaustively tested—bacteriologically for purity, physiologically for activity.



The antitoxic potency of our Concentrated Antidiphtheric Serum (Globulin) is expressed in units (Ehrlich standard, as approved by the United States Public Health and Marine Hospital Service), and each package is numbered to correspond to the number of antitoxic units it contains.

Bio. 15— 500 antitoxic units.
Bio. 16—1000 antitoxic units.
Bio. 17—2000 antitoxic units.
Bio. 18—3000 antitoxic units.

Bio. 19— 4000 antitoxic units.
Bio. 20— 5000 antitoxic units.
Bio. 21— 7500 antitoxic units.
Bio. 22—10,000 antitoxic units.

Specify Parke, Davis & Co.'s Concentrated Antidiphtheric Serum (Globulin) on your orders. Have assurance that the antitoxin which you administer is of guaranteed purity, potency and uniformity.

PARKE, DAVIS & COMPANY

Laboratories: Detroit, Mich., U.S.A.; Walkerville, Ont.; Hounslow, Eng.

Branches: New York, Chicago, St. Louis, Boston, Baltimore, New Orleans, Kansas City, Minneapolis, Seattle, London, Eng.; Montreal, Que.; Sydney, N.S.W.; St. Petersburg, Russia; Bombay, India; Tokio, Japan; Buenos Aires, Argentina.

The Journal of the Medical Association of Georgia



Published Monthly under Direction of the Council

Editorial and Business Office—300, 302 and 304 Harison Building.

Subscription Price, \$1.00

Entered as second-class matter, August 4, 1911, at the Post Office at Augusta, Ga., under the Act of March 3, 1879.

Vol. II

AUGUSTA, GA., NOVEMBER, 1912

No. 7

CONTENTS AND DIGEST.

ORIGINAL ARTICLES

The Prevention of Diseases. By W. D. Travis, A.B., M.D., Covington.....	210
The After Care of Simple Mastoid Wounds. By Albert B. Mason, M.D., Atlanta.....	211
Woman and Her Physician. By R. H. Jenkins, M.D., Hogansville.....	214
X-Ray in the Treatment of Skin Lesions. By Cosby Swanson, M.D., Atlanta.....	217
The Fly. By A. Fleming, M.D., Waycross.....	220
Eclampsia. By M. M. Johnson, M.D., Waycross.....	221
Three Cases of Intestinal Obstruction, with Operation. By F. J. Carswell, M.D., Waycross.....	223
Treatment of Pellagra with Report of Twelve Cases. By J. E. Knight, M.D., Waycross.....	225
The Relations of the Eye to Diseases of Other Parts of the Body. By B. H. Minchew, M.D., Waycross.....	227

EDITORIALS

Criticisms of Our Hospitals.....	231
Hospital Efficiency	233

NERVOUS AND MENTAL DISEASES

The Favorable Effect of Salvarsan in Tabes Dorsalis	233
---	-----

SOCIETY NOTES

Seventh District Medical Society.....	239
Eighth District Medical Society.....	239
Morgan County Medical Society.....	240

MISCELLANEOUS

The Second Declaration of Independence.....	230
Board of Medical Examiners.....	237
New Members Since Last Issue.....	240

UNIVERSITY OF GEORGIA

COLLEGE OF MEDICINE

Augusta, Ga.

W. H. DOUGHTY, Jr., M.D., Dean.

W. C. LYLE, M.D., Vice-Dean.

L. W. FARGO, M.D., Registrar.

The 81st Annual Session of this College begins September 16, 1912.

Four years graded course of eight months each.

Didactic and recitation system of instruction.

Full time teachers in primary branches.

Well equipped laboratories.

Ample facilities for clinical teaching.

Three large Hospitals, and Out-Patient Clinic and Dispensary under exclusive Control of the Faculty.

Entrance requirements same as for literary degree—Fourteen units.

For further information, address

An Integral Part

of the

University System

THE REGISTRAR

College of Medicine

AUGUSTA, GEORGIA.

Journal of the Medical Association of Georgia

W. C. LYLE, M.D., Editor - Augusta, Georgia

THE PREVENTION OF DISEASES*

W. D. Travis, A.B., M.D., Covington

The subject I have chosen to bring before you for discussion today is of such massive proportions that I can, on account of my limited time, touch only on a few points of vital interest.

The well-posted medical man of today, using the latest improved methods of diagnosis and treatment, working for the uplifting, the betterment of mankind, stands in his own light oftentimes from a financial standpoint. If he makes a correct diagnosis and promptly institutes the right line of treatment, in many cases the duration of his patient's illness is materially lessened and the patient decides that he "wasn't sick much". On the other hand, if, from ignorance or any other reason, he is slow in making his diagnosis, and not careful to investigate by every available method the existent symptoms and fails to give the right treatment, his patient is sick for a much longer period—the bill larger—and, if the patient finally recovers in spite of the disease and the doctor, he says: "Doctor, I always will love you, you have saved my life". The doctor makes for himself the reputation as a great "fever doctor", and is called in consultation to see the cases of the former doctor, who doesn't have many cases of "the fever".

Before any great progress can be made along preventative lines, the doctors, as well as the general public, must be better informed.

The microscope has opened up to our vision a new world. By its use we have been enabled to determine positively the cause of many of our most important and fatal diseases.

In their effort to study and prevent disease, many brave physicians have given up their lives, but not in vain, as the result of their labors are of great present benefit, and will undoubtedly be the means of saving thousands of lives, not only of the

present generation, but also of many generations in the future.

The knowledge of germs as a cause of disease was practically unknown prior to the Civil War. "Laudable pus" was still in existence when the writer of this article began the study of medicine, and asepsis was unknown.

I say, without fear of satisfactory contradiction, that small pox, diphtheria, malaria, typhoid fever, tuberculosis, and many other dangerous diseases can and should be made to disappear from the face of the earth. These diseases, as you all know, do not originate *d's* novo. They must come from a pre-existent cause, and several of them in a roundabout way. Proper isolation and disinfection should prevent more diseases than is now being prevented. This, in most cases, is due to ignorance. To make the statement that our children must have measles, whooping cough, chicken pox, mumps, etc., is at the present time absurd. You have just as much right to say that our young adults should all have small pox and typhoid fever.

As this country becomes more and more thickly populated, we will have to exercise preventative measures in proportion. The more the fuel, the greater the danger from fire.

All over the North, East, West, and in some parts of the South, the smaller towns are beginning to realize the importance of sanitary regulations and are passing ordinances as to the handling of food stuffs and the disposal of all refuse. Water supplies are being looked after more carefully than ever before, and it is to be hoped that the time is not far distant when the pollution of our soils and streams will be a thing of the past, and that our Legislatures will not be satisfied with the mere passing of sanitary laws, but will go further and aid us in working out a satisfactory system of eugenics, and pass laws prohibiting the marriage of idiots, imbeciles, and confirmed criminals. No un-cured consumptive ought ever to be allowed to marry. Some of you are well aware of the fact that in our own State about ten per cent. of the deaths from all

* Read at the meeting of the Eighth District Medical Society, September 25, 1912

causes are due to consumption. I understand that this disease causes about one hundred and fifty thousand deaths in the United States every year, and leaving out the personal factor as to feelings, this means an annual loss to our government of about three hundred and thirty million dollars.

It is the duty of every person present, and should be their pleasure, to put their shoulders to the wheel and do everything in their power to help in this noble work of prevention. Cleanliness should be our watchword. Clean bodies, clean foods, clean premises, towns and counties. The three greatest disinfectants—fresh air, sunshine, and fire—are not enough used. Why buy disinfectants that oftentimes bring about a false idea of security, when much of the objectionable material can be burned or boiled and thereby be rendered safe? The general custom of throwing around dry lime, oftentimes in lumps, should be stopped and freshly prepared milk of lime used in its place.

The most satisfactory substances used for disinfection of rooms are sulphur dioxide and formaldehyde, but no aerial disinfectant can be effective without its being well confined. All cracks in windows and doors and the openings into the chimneys should be carefully stopped either with the gummed paper strips, or strips of newspaper and paste, made of flour and water, which has been boiled. If sulphur is used, the air should be rendered moist by the previous generation of steam in the room. Sulphur candles are not at all satisfactory. Powdered sulphur lighted by means of alcohol is much to be preferred.

If you decide to use formaldehyde, which has the advantage over sulphur of not injuring the contents of the rooms, the permanganate of potash method, 3½ ounces of permanganate to one pint full strength formaldehyde solution for each one thousand cubic feet, has the advantage of doing away with the necessity of using the high-priced apparatus for the generation of the gas. Spontaneous combustion has occurred with formaldehyde gas, but this danger can be avoided by using several containers—not more than seven or eight ounces of the potash to one quart of the solution should be in any one charge. There should be no flames in the room. To get rid of the odor of the gas after fumigation, which is sometimes persistent, ammonia may be sprayed in the

room. Mahogany pianos and heavy furniture can best be wiped off with some liquid disinfectant, dried and then polished, and removed from the room, as sometimes when left in the room during fumigation they are sprinkled over with white spots, which are not easily removed. Much depends on the thoroughness of any method used.

The discovery of the fact that malarial and yellow fevers are due to the mosquitoes of certain types is one of the most important achievements of our time. The destruction of these pests by means of filling, draining, oiling, and the use of fish to destroy the larvae is well known to you all, as well as the use of properly fitted screens over doors and windows. The intelligent use of these methods will be the means of saving thousands of lives, the opening up for habitation places formerly uninhabitable, and the consequent increase of business and the production of wealth. It is unnecessary to state that we will continue to use quinine as a preventative and curative agent in malaria.

Not only the house-fly and mosquito have been convicted as being the means of the transmission of disease, but also the flea, louse, bedbug, cockroach, sand-fly, tsetse-fly and other insects as well.

Much has been done in the way of the prevention of diseases by means of antitoxins and vaccines, notably in small pox, typhoid, diphtheria, meningitis, tetanus, hydrophobia and more recently work is being done as to the preparation of an antitoxin for measles.

In twelve thousand soldiers inoculated against typhoid last year at San Antonio, there occurred only two cases during the whole encampment.

In the State of North Carolina it has been made a criminal offense for any doctor who has a case of typhoid fever under treatment, not to instruct the attendants as to how to prevent its spread. Every discharge from a typhoid fever patient should be thoroughly disinfected and every malarial fever patient should be covered over with mosquito netting wherever practicable.

As early as 1876, the distinguished Dr. Bowditch made this statement: "Our present duty is organization, national, state, municipal, and village. From the highest place in the national council down to the smallest village board of health we need organization. With these organiza-

tions we can study and often prevent disease."

We are glad to note that quite recently Congress has appropriated \$50,000 for a Bureau of Child Research, which is now a part of the Bureau of Commerce and Labor; and that President Taft has appointed as its head a lady thoroughly trained in this line of work.

In the city of Washington there is this week assembled the International Congress of Hygiene and Demography, at which many nations will be represented, and from whose work we will no doubt be greatly benefited.

The greatest foes to progress along sanitary lines are ignorance and stupidity. We can, to a limited extent only, educate adults, but our greatest hope is the children. Illustrated lectures and talks should be given regularly in our public schools by those best qualified, and our children should be taught how to care for themselves and others; what to avoid and how to avoid it.

A sound mind in a sound body is, of all things, most to be desired, and the intelligent use of preventative measures will contribute materially to this result.

"Let us acquire here a closer touch with each other, a deeper faith in our profession and its noble destiny, and a stronger determination to labor in brotherly co-operation for the loftiest ideals of service to science and the race."

THE AFTER CARE OF SIMPLE MASTOID WOUNDS

Albert B. Mason, M.D., Atlanta

There is so little in text-books on the subject of post-operative care of mastoid wounds that the beginner in otological surgery and the physician to whom is left the care of mastoid cases are led to believe that the care of such wounds is a very simple and unimportant subject. However, to take charge of and to care for a wound that takes from six to ten weeks to heal, it is necessary that the surgeon display considerable skill and surgical knowledge. Believing that nearly as much towards the success of a mastoid case depends upon its management after the operation as upon the operation itself, I am prompted to describe in detail the after care of the case, with the hope that some may profit by my

limited experience, which I give for what it is worth.

In order to be thoroughly understood we will begin by describing

The Operative Dressing

of an uncomplicated simple mastoid operation. Whether the whole wound is to be packed, or whether the angles of the wound are to be sutured and the center and deeper part left to be packed and heal by granulation, the method of applying the operative dressing is practically the same.

The gauze used is a strip of five per cent. iodoform gauze one inch wide and of suitable length. The strip is made from strips four inches wide, folded one inch from each edge, and down the center, thus making a strip one inch wide and free from ravellings.

A strip of this is grasped at the end with a pair of angular dressing forceps and carried to the deepest part of the wound, which is in most cases the antrum, and gently—very gently—packed fold upon fold until the cavity is filled, care being taken to pack well under the tegumentary flaps, if the angles of the wound have been sutured.

When the cavity is filled with gauze, several folds are spread over the wound to afford a cushion for the repose of the auricle. Over the whole a fluffy pad of sterile gauze is placed in such a manner as to completely cover the wound and anterior surface of the auricle. Over this a pad of absorbent cotton is placed and the bandage applied.

The Bandage

It is no easy matter to apply a bandage that will hold the dressing in position and at the same time be comfortable to the patient. Most operators apply a bandage that covers the greater part of the head and forehead, spreading fan-like over the operated side, a bandage that easily slips. Others carry the bandage around the neck and under the chin, a bandage that is very disagreeable to the patient.

With the frontal eminences and the occipital protuberance as fixation points I apply the bandage as follows, using a two-inch gauze bandage. The patient's head is supported by the nurse with one hand under the chin and the other on the occiput. A few inches of the bandage are unrolled and held with one hand between the

frontal eminences, while the other carries the roll downward over the center of the dressing, around the head under the occipital protuberance and above the ear of the opposite side to the point of beginning; the second turn begins as before, but passes in succession directly over the anterior, lower and posterior borders of the bandage to the under surface of the occipital protuberance, where it is reversed in such a manner that the **lower** edge of the bandage is made to hug the head closely and to conform to the irregular curved surface of the dressing, after which the turn is completed directly on top of the first turn to the point of beginning; the third turn passes directly over the upper border of the dressing to the under surface of the occipital protuberance, where it is reversed in such a manner that the **upper** edge of the bandage hugs the head and conforms to the curve of the dressing, after which the turn is completed as before; each succeeding turn is a repetition alternately of the second and third, an additional part of the dressing being included under each one, until the dressing is completely covered, strips of adhesive plaster following the general direction of the second and third turns securing it. Properly applied this bandage is a band around the head two inches wide, except over the dressing. It is easily concealed on girls and women by a bandeau and bow of ribbon.

The First Dressing

in an uncomplicated case should be made not later than the fourth day, and preferably on the third. The sutured portions of the wound are firmly united at the end of 72 hours, making it possible to remove the sutures at this time. After the third day granulations springing from the bone become incorporated in the meshes of the gauze rendering its removal exceedingly painful.

Hemorrhage

occurring in sufficient quantities to soak through the pads of gauze is an indication for immediate removal of the dressing. The bleeding points are found and controlled by ligature or pressure—gauze pressure.

Pain

is rarely complained of following the operation. Should this occur a few hours after the operation it is evidently due to

unequal pressure on the edges of the wound or the auricle. Re-applying the outer dressing suffices to give relief. Persistent pain occurring 36 to 48 hours after operation points to stitch abscess or infected wound, if there is a rise in temperature, and cellulitis, if no temperature. When present, the outer dressing should be removed and the wound inspected. Stitch abscess calls for the removal of the stitches, thorough cleansing of the wound and painting with half-strength tincture iodine daily for a few days. An infected wound should be unpacked, irrigated with a hot bichloride solution, 1-2000, and painted with half-strength tincture iodine daily until all evidences of infection, pain and temperature, have disappeared.

Occasionally children pull at the bandage until it is loose, in which case it should be immediately applied to prevent an unclean finger reaching the wound.

Facial paralysis and exposed dura do not call for an early inspection of the wound, while a wounded sinus is an indication for waiting five or six days before removing the dressing.

Temperature

I have purposely refrained from mentioning temperature as an indication for an early removal of the dressing. Even extreme changes in temperature occurring without other symptoms referable to the mastoid wound are not considered. Should it occur after exposure of the dura or sinus, or in connection with pain in the wound the dressing should be removed and the wound treated as already described. And it is important that pain should not be confused with stiffness of the neck following the operation. Pain of the wound occurs irrespective of movement of the head and shoulders.

Unless otherwise indicated, then, the dressing should remain undisturbed for seventy-two hours. Infants and small children should be given a few breaths of chloroform for the first dressing.

Supplies and Instruments

needed for the dressing include: Sterile towels, sterile cotton sponges, sterile absorbent cotton, plain sterile drainage gauze one-half inch wide, plain sterile gauze, two-inch gauze bandage, Z-O adhesive plaster, small angular dressing forceps, bandage shears, stitch scissors, ear

speculum, suture forceps, cotton applicator, half-strength tincture iodine, and either bichloride or cyanide of mercury solution, 1-2,000.

It should be needless to state that the hands of the surgeon should be put through the same process of sterilization as for the operation. Every thing being ready and in easy reach of the surgeon, the patient is so placed that the operated ear and back are towards the surgeon, and, if an infant or small child, a few whiffs of chloroform given.

The Dressing

The bandage is divided just in front of the ear and the outer dressing removed. Should it adhere to the auricle and wound edges, as very often happens, a thorough soaking with hot bichloride or cyanide, whichever is at hand, will soften the outer dressing so that it is easily removed. After this is done, the head and shoulders are draped with sterile towels, leaving only the ear and wound exposed, and the skin and scalp adjacent washed with sponges wrung out in the solution.

Removing the Drainage Gauze

causes the only pain incident to the dressing. The thorough soaking of the wound and contents with the hot bichloride solution softens the mass and makes the procedure less painful. The end of the gauze is grasped with the fingers or dressing forceps and very gently removed, great care being taken that the united flaps are not torn apart. If the sinus has been injured, in which case the dressing is changed the fifth or sixth day, care should be taken in removing the gauze from over the wounded sinus. In fact, it is better to cut the gauze, leaving that portion over the sinus in place, and remove it at the subsequent dressing. If one is careful and patient enough to take the time, the wound can be unpacked with little or no pain. It is absolutely unpardonable to give one steady pull and remove the packing en masse, with the idea that the quicker it is out, the less pain will be inflicted.

Toilet of the Wound

After removing the drainage, the speculum is inserted in the auditory canal for the purpose of inspecting the drum. The canal should be dried of any moisture that has accumulated. The wound, itself, should be inspected with reflected light,

dried with cotton on the end of an applicator and any shreds of gauze removed with forceps. The wound is then painted lightly with half-strength tincture iodine—tincture iodine and alcohol, equal parts—the object of this being to rid the wound of saprogenic bacilli, and to promote healthy, dry and firm granulations.

While it is true that some bacilli are quite harmless and that the iodoform gauze has removed any danger of infection, it is in keeping with all surgical teachings that the wound be kept clean and free from foul odor, and I know of no remedial agent that keeps the wound as clean and free from odor as iodine.

Iodine unquestionably stimulates the growth of granulations that are firm to touch, blood red in color, and free from secretion in excess. It does this, first, by reason of its germicidal properties, and, second, by causing a local inflammation, with resulting hyperaemia.

There is practically no pain incident to its use. I have used it in dressing young children five years old without eliciting a whimper.

The Stitches

should not be removed until the toilet of the wound is finished. They afford sufficient support to the line of union to prevent separation from the pressure put upon them by the removal of the gauze. If the stitches be disturbed before the wound is unpacked and cleaned of all discharges and infective material, infection of the flaps is liable to result. Should any infective matter remain on or around the sutures, the iodine penetrates deep into the needle openings in the integument and prevents infection from taking place.

Repacking the Wound

After removing the stitches, the wound is ready to be repacked. For this purpose a strip of plain gauze one-half inch wide, made from a strip two inches, as described above, is used instead of iodoform gauze, not because of the possibility of iodoform poisoning, for such a danger is remote, but because of the very penetrating and disagreeable odor of the remedy that clings to both patient and surgeon.

“You may wash, you may scrub
Your hands, if you will;
But the scent of iodoform
Clings to them still.”

Iodoform is used with as good results as iodine, but has the disadvantage of having the disagreeable odor. Iodine is practically odorless and hence more desirable.

The wound is packed gently as in the operative dressing, the same care being taken to pack well up under the flaps, so as to afford support enough to prevent their sinking and possible adhering to the bony walls of the wound. Attention to this will produce sufficient granulations to prevent a sunken scar. Over the whole a fluffy pad of gauze is spread and the bandage applied.

I might add here, that iodoform is used to pack the wound at the time of operation, for the simple reason that the small amount of iodine applied at each dressing, while sufficient for a day or two, will lose its effect before the dressing is changed, while enough iodoform is in the gauze to last the three or four days.

Daily Dressings

I believe, give the best results. Certainly the daily inspection of the wound lessens the chances of anything going wrong and affords an opportunity of remedying any exigency that might arise.

Diet and General Considerations

The diet should be regulated the same as following any other operation not on the intestinal tract. The bowels and kidneys should be made to perform their functions daily.

After running a normal temperature in the morning and an evening exacerbation of not more than one degree for four days, the patient can leave the bed with safety, and a few days later, the hospital.

After the patient has left the hospital, he is requested to return there for the dressings, as sufficient help and supplies are always at hand.

The wound should be allowed to fill in as rapidly as it will from the bottom, but the top of the wound should be packed tight enough to prevent its closing before the deeper part of the wound has filled in. It sometimes happens that granulations grow too rapidly around the edges of the wound, the so-called proud flesh, pale in color and soft to touch. These should be removed either by touching them with four per cent. silver nitrate or by the use of the dull curet.

As the wound gets smaller and smaller each day, the size of the outer dressing is

diminished accordingly and a strip of adhesive plaster substituted for the bandage. The last few dressings consist in drying the wound out and inserting a small piece of sterile absorbent cotton in the opening, until, finally, there is no opening left. It is well to keep a piece of adhesive over the scar for a few days before dismissing the case, as a little moisture sometimes persists after an apparent cure.

WOMAN AND HER PHYSICIAN*

R. H. Jenkins, M.D., Hogansville

In the sketch of woman I will present some of the most prominent characteristics of the one and endeavor to portray what should be the character of the other.

Coleridge once remarked that he is the best physician who is most successful in inspiring his patient with hope.

The maladies of the female sex, in a large degree, have their psychical as well as their physical expressions, and are so often attended with mental depression and anxiety, that he who knows her nature best, can read most readily all mental and moral manifestations of bodily disorder and by a cheerful and intelligent confidence arm her with patience and faith, will be woman's most successful physician.

Every well-educated medical man ought to know something more of woman than is contained in the volumes of a medical library. Her history and literature, in all ages and all countries, ought to be gathered as the garlands, with which to adorn his scholarly career as a physician.

Briefly referring to some of woman's more obvious physical characters, we observe, first, that she is inferior in weight and stature to man; that her bones are smaller, more fragile than his.

The greater length of woman's clavicles explain her awkwardness in throwing, or other violent exercise with the arms, and on the other hand the greater ease with which she can carry or hold an infant. The broader and shorter hips than man's do not permit her to run with either grace or rapidity. Moreau says "the general delicacy of muscles and elegance and beauty of form, belong to the essential nature of woman". Habits of life may increase these characters; as Hippocrates

* Read at the Fourth District Medical Society meeting, September 9, 1912.

was forced to admit, there remains a radical innate difference, which will be found in all countries and among all people.

Beauty is woman's greatest physical characteristic. Age, disease, poverty, suffering, ignorance, evil passions, wicked habits may mar or even destroy it; not in a single individual, but in those deriving their origin from her; nevertheless this gracious gift is noted in her sex.

Turning now to woman's mental characteristic, the organ of mind, the brain is smaller than man's. This does not prove inferiority. It renders it probable. Woman has greater quickness of thought; in this she exhibits one of the highest attributes of mind; something akin to genius. The mystery of woman's love is in its concentration; she loses herself in the object she loves. In sexual love she is less sensual than man; when she lapses from virtue she is the tempted, not the tempter. The citadel of her purity does not consume in the fires of passion. In the heroic element, woman is more remarkable for endurance than performance, for passion, than for action. As physicians we have noted her patience under disease, and her reticence, especially; when her sexual system is involved, her shrinking modesty; and, apart from ignorance, this is often fraught with serious consequences, becoming chronic; will not yield to treatment, followed by death. We should consider the despondency, the different diseases induces. This imperiling of her sexual life causes a gloom that darkens her life and interferes with the successful treatment in many cases. This arises in part from her indisposition to complain, but suffer in silence.

I will not continue this sketch of woman. We should study and admire to appreciate her mental and physical beauties. For example, she has greater quickness of thought; so, too, she learns more readily, and probably retains less strongly. In composition and in conversation she is generally more fluent than man, expresses her thoughts with more grace and facility, while the delicate play of her fancy beautifies her thoughts like the gentle aurora of the northern sky. She is more sensuous, not sensual; of woman's greater refinement of manners and delicacy of feelings, there can be no doubt. Her step is lighter, her touch more gentle, her anticipations of wants quicker, and her tact, which is

another name for touch, is more ready and sensitive.

In moral excellence few will question her superiority. In religion, her life is marked by the most earnest faith and devotion. Man is more skeptical; she has more of a confiding, trusting nature. Lo, too, in how many nurseries through all christendom will tonight the patter of little feet be stilled, while child voices lisp their evening prayers at mothers' knees! Of woman's love let us speak reverently and believingly as one of their richest blessings, in all man's pathway from the cradle to the coffin.

You who have experienced in mothers' loving nurture, kind caresses and watchful cares; you who have witnessed her unwearying devotion at the couch of her sick child,

"That knoweth not

His mother while she blesses,

And droppeth upon his burning brow
The coolness of her kisses."

To every man the name of her who bore him should be precious. Shall we not gather strength for all generous deeds, heroic and noble works, by looking to her whose smile was our first sunshine; whose eyes were the first stars of heaven to us? The end of woman on earth—her evident vocation—is love. There may be for every man a sanctuary in some true woman's loving heart.

The diseases of women must hereafter, as heretofore, be chiefly intrusted to male practitioners. Now, what manner of man ought he to be who assumes the treatment of such diseases? Let us suppose him to present the true criterion of manhood, and the requisite professional education, I remark, first, that he must be a gentleman. A gentleman's first characteristic, says Ruskin, is that fineness of structure in the body which renders it capable of the most delicate sensation, and structure in the mind which renders it capable of the most delicate sympathies; this is another word for an intense humanity. Without this the physician, however rich and varied his culture, fails of the true spirit of his profession. A medical gentleman is not one who has sacrificed his emotional nature and become a frigid intelligence, but his heart throbs with sympathy for human suffering, and his hand not only brings relief, but brings it kindly. Coarseness, harsh tones, rude steps, downright vulgarity are ut-

terly alien from the true medical character. Physical suffering is hard enough to bear. Tears, groans, contortion of the face, writhing of the body—these are among the witnesses of its severity. Why should we add a feather's weight to the crushing load, whose office it is to remove or mitigate pain, especially when we deal with suffering woman? Her physician should be a man pure in heart and life. The medical profession may compare favorable in regard to virtue with any other class of men.

When we think of the sacred confidence reposed in us; of the high responsibility under which we rest, yet lapses do now and then occur, how terribly criminal does it appear! Nor can he who thus dishonors his calling, who smites his victim with a more terrible evil than any disease he is called to treat, and blasts the purity and destroys the peace of a family, escape punishment.

In connection with this it may be worth while to mention that woman herself involuntarily shrinks from a sensual nature; she will discover quickly, however fair his exterior, a man of licentious habits and lustful desires. No physician can be a welcome visitor to her sick chamber who is not free from all taint. Purity of heart and life is the true physician's passport to the home of virtue and his panoply of protection in the hour of temptation.

Such a physician should be a temperate man in regard to alcoholic beverage. A clear eye, a steady hand, and an unclouded intellect should be always the physician's possessions, while the besetting influence of intemperance is in no one a greater outrage upon decency, purity, and virtue than in him who is treating the maladies of woman. He should be a conscientious man.

What he does and what he says, especially the promises made to a patient, should be founded on truth; all falsehood of word or act, all delusive hopes, should be utterly forbidden.

Let honesty mark all his intercourse with his patient, and she will learn to confide in him, to trust his advice and to obey his instructions, even in that most terrible of diseases, which devours life with wasting and agony, and upon which is ineffeably written, as it occurs in some situations and some stages, no hope. He ought not abruptly to pronounce the dreadful doom; must gradually unfold the truth:

and this knowledge, coming from him, may divert the sufferer's thoughts more and more to a world where the pangs of disease are unknown.

Woman is like the flower and the harp, and her physical disorders will be most skillfully treated by those whose kindly and courteous sympathies are manifest in voice tone, in word, and in deed.

Anacreon's twenty-fourth ode concludes thus:

"To man she gave in that proud hour,
The boon of intellectual power.
Then what, O woman, what for thee
Was left in nature's treasury?
She gave the beauty mightier far
Than all the pomp and power of war.
Nor steel nor fire itself hath power
Like woman in her conquering hour;
Be thou but fair; mankind adore
thee."

One thing more; you will pardon me—but I am thinking. No, your pardon need not be asked for declaring that if the physician be truly a religious man it will add to, not detract from, other qualifications. A gentleman belongs to no particular sect, creed or breed.

The christian physician has a strong card of sympathy with woman, whose religious nature is deep, so earnest. He has power of no little consequence in many cases over will in securing faithful and persistently using their therapeutic measures to success.

But whether he be christian or not, he must feel the influence of her religious character; a virtue goes out of her, blessing every nature upon which it falls. This virtue, this influence, is all the more powerful when she is crushed by disease, like the richer fragrance of the bruised summer flowers. The lesson taught by unrepining suffering, unselfish desire for health, hopeful trust, willing obedience and pious resignation are rich beyond measure.

He will grow wiser whose heart is open to these sweet influences, who has been eulogized for nineteen centuries, and must be evermore. Whatever be her lot in life, we as men must acknowledge that while infinite power gave us being, infinite mercy gave us woman.

A history of discomfort and oppression in the chest and throat after eating, relieved by induced vomiting, suggests cardiospasm.—American Journal of Surgery.

X-RAY IN THE TREATMENT OF SKIN LESIONS

Cosby Swanson, M.D., Atlanta

Ever since the discovery of the principles of electricity by Stephen Gray in 1730, its study has been of great interest to the scientist. The discovery of the Leyden Jar by Cuneus in the town of Leyden, in 1745, was seized upon by the renowned Benjamin Franklin, who invented a battery of jars capable of giving shock quite analogous to the terrifying powers of the thunderbolt. This, together with his kite experiment, which is familiar to all, marks the true birth of electrical science.

Since that time the study of electricity has become one of the most important and interesting subjects in the realms of science. Since its use by Franklin at the Middlesex Hospital in London in 1767, there have been many marvelous advances made, among which the discovery of X-ray by Prof. Roentgen, of Germany, in 1895, is of greatest interest to medical men. While at first the method of applying it in the treatment of disease was very crude, improvements were gradually made until it has reached such a degree of perfection that today it can be applied with as much accuracy as any other remedial agent. Its worth is well shown by the fact that today the electrical apparatus constitutes a large part of the equipment of the majority of our leading physicians, and further, that its study has become a part of the curriculum of the best schools.

It is not the object of this paper to go into the principles of electrical science, or to enumerate the many and various diseases to which it can be applied with great success, but I shall confine myself to the application of the X-ray in the treatment of skin lesions.

To successfully treat these cases with X-ray it is necessary to have a working knowledge of electricity, a good machine (Coil preferred), a reliable method of gauging the quantity and quality of the rays to be used and a proper conception of the disease to be exposed.

After the introduction of Roentgen rays as a therapeutic agent it was universally adopted by physicians, and, as many had no conception of the nature of this energy, or accurate method of gauging it; its use was followed by a large number of disas-

trous results both to the operator and patients. This lack of knowledge on the part of the physician has greatly retarded the growth of its usefulness.

The method of its application for therapeutic purposes has been most varied. Each operator has followed a method of his own, as may be seen by any one who cares to read the records published during the last few years. Usually the author describes in more or less detail the electrical apparatus he employs with the addition of the voltage, amperage, time of exposure and the distance of the patient from the tube. It is obvious that this data is of no value to any one but to the author himself, who can always employ the same apparatus under similar conditions.

At first the application of the X-ray was purely empirical. Frequent sittings of short duration being given until some obvious change was noted in the integument.

Of late years there have been various methods devised to gauge the quantity of rays given off by the tube. Some have been more or less successful, but in the main they have fallen far short of the desired results owing to the varied complications which prevented their practical use.

The method that I shall endeavor to explain is one used by a large number of European radiotherapists, and was devised by Doctors Sabouraud and Noire, of Paris. It is quite simple, and easily used, and enables us to gauge the quantity of rays given off by the X-ray tube with enough accuracy so that the length of the exposure can be limited according to the effects that we wish to produce.

A brief description of this method is as follows: A small disc of paper over which is spread a layer of platinocyanide of barium in collodion and acetate of starch is placed in a pastille holder directly in front of the anode at a distance of exactly seven and one-half centimeters. The amount of rays necessary to turn the pastille to an orange color is styled a pastille dose. This dose is sufficient to affect the hair follicles and at the end of a fortnight to three weeks after it has been applied the hair falls out. This is the quantity of X-ray just short of erythema. When larger quantities have been used the area exposed will become erythematous, vesicate, or ulcerate, and, too, the time of the appearance of the reaction after the exposure will be shorter than when only a

pastille dose has been given. This method has made it possible for us to study the physiological and the therapeutical properties of the X-ray more fully also it has been of great value in showing us the baneful results of the frequent and repeated exposures of our patients, as was formerly done, without any reliable method of measuring the dose, which produced a marked cumulative effect before a reaction was noticed. It was to this repeated exposure without measurement that most of the harmful results was due.

To use this method successfully in treating skin lesions it is necessary to have a shield (lead glass preferred), one that will enclose the tube, will allow the regulation of the distance and at the same time is supplied with apperatures of different sizes as may be necessary to expose the area under treatment. Too much emphasis cannot be laid upon the exactness with which the measurement is carried out, for this is one of the most important features. Another very important item, is the quality of the X-ray tube. It should be of medium vacuum, one that has sufficient penetrating power to penetrate the thickness of the skin. This power of penetration can best be estimated by an instrument devised by Benoist, in which the rays are passed through various thickness of aluminum and the degree of penetration is determined by a fixed scale. By using a tube of medium vacuum, a greater portion of the current traversing it is converted into X-ray; they are more readily absorbed, re-act more powerfully on the tissue and particularly the skin. To keep the tube of the same vacuum the interruptor should be run at a very slow speed (if a coil is used). The amount of current should not exceed five amperes, and the tube should never be used for anything else than for treatment purposes.

The exact phenomena that takes place after an exposure to the X-ray is not well understood. It has been shown that it is able to set up chemical alterations in the tissues, the manifestations of which are more or less varied according to circumstances. It is well known that diseased tissue such as epithelial and sarcomatous neoplasms re-act more readily to the X-ray than healthy tissue, and, too, the reaction is more marked the more abnormal the tissue. This very important fact was first pointed out by Kienbock, and later was confirmed by Schlotz, this can be demon-

strated in treating tinea of the scalp and acne rosacea; usually in tinea the diseased hairs will fall out after an exposure before the healthy ones; also after an exposure of acne rosacea to the X-ray, the reaction is very much more marked in the diseased area than the healthy. This selective action that the X-ray has for morbid tissue makes it possible to destroy a cancerous growth without any signs of irritation or any apparent modification of the healthy tissue.

The therapeutic properties of the X-ray are sedative, stimulant, irritant, and escharotic. The primary action of an exposure is that of a stimulant, large doses become irritant and if still larger escharotic. In deciding the quantity of the X-ray to be used in the treatment of any lesion there are several important points to be taken into consideration. The disease from which the patient is suffering, the reaction desired, the sensibility of the tissue, location of the lesion, whether male or female, blonde or brunette, for the reaction is usually more intense on women than men, while blondes are more susceptible than brunettes. The age of the person should never be overlooked, for the skin of a child is more sensitive to the X-ray than that of an adult.

With the use of the methods of measurements which have been developed, we are able to prevent disastrous results with certainty. At most we may get a slight over-reaction, such as an erythema or vesication, but ulceration or sloughing is no longer to be feared.

Of late the X-ray has been tried in the treatment of almost every possible dermatosis. The same holds good here as in many other new lines of treatment; what proves to be beneficial in a few diseases is seized upon and used for every similar affection. The X-ray has proved to be a potent agent in the treatment of a few skin diseases, and it was hoped that it would have a more profound result on some diseases inaccessible to ordinary known therapeutic agents. One after another was subjected to it, some were cured, while others were improved and a few were aggravated. These results were due largely to its use in conditions where it was not indicated and the operator inexperienced. In the treatment of skin lesions X-ray should not be used to the exclusion of other indicated remedies. It should be recognized as a potent agent and

a helpful addition to our resources in dealing with some diseases, especially so in the following conditions, epithelioma and other cutaneous cancers, keloid, scar tissue hypertrophy, lupus erythematosus, lupus vulgaris, and other cutaneous tuberculosis, tinea tonsurans, favus, pruritus ani, hypertrichosis, hyperhidrosis, verruca, different forms of keratoses, extreme and obstinate types of acne, in limited and rebellious cases of eczema and psoriasis, and at times others may be benefited.

Its reckless and indiscriminate use in conditions easily controlled by simpler methods is to be deplored, such as the ordinary cases of eczema and psoriasis. It is by such promiscuous use that it has come into disrepute. We would reserve it for cases in which other methods have failed or are contraindicated. It is quite permissible to treat cancerous growths with the X-ray, not only because of the uncertainty of all other methods of treatment, but also on account of the admirable cosmetic results in these conditions.

In dealing with the various diseases the treatment should vary according to the disease and the conditions presenting. For instance in treating eczema with the X-ray the method of procedure should be quite different from that of dealing with an epitheliomatous growth. The dose should be small and repeated often. The method that I prefer is to give a half pastille dose every third day till two pastille doses are given and repeat these exposures every three to four weeks until the desired results are produced.

Nothing in medicine is more firmly established than the curative effects of the X-ray in the treatment of epitheliomatous growths. To successfully treat epithelioma with the X-ray a number of conditions must be taken into consideration. The most important are the rapidity of the growth, its character, location, glandular involvement, age of the patient and state of the general health. Where the growth has been very rapid and the glands are involved it should be excised, the adjacent glands removed, then all the diseased area exposed to the X-ray, giving large doses through an aluminum filter every seven days until three or four exposures are given. By using the filter a tube of greater penetrating power can be used as the superficial reaction is lessened which will allow longer exposures. When this method

of procedure is carefully carried out there are fewer recurrences than when it is not used.

There is no class of cases in which the treatment has yielded such brilliant results as in superficial epithelioma of slow growth involving only the skin, at least ninety-five per cent. of all growths of this nature can be cured by the use of the X-ray.

So eminent an authority as Dr. Pusey says, that after years of experience in treating epithelioma, he is convinced that the danger of recurrence is greater in skin epithelioma after excision than after removal by the X-ray, and in those cases where the removal of the glands becomes necessary, an operation followed by the X-ray is the ideal procedure.

In the treatment of epithelioma the method of application that I follow is to give two pastille doses and repeated every seven to eight days until a marked reaction has been produced. Two weeks after the last exposure, or after all the erythema has disappeared, the treatment is repeated, if there still remains any signs of cancerous tissue. Lately I have had several cases in which this method was used which has proven very satisfactory after all other agents had failed.

In those cases where this method cannot be carried out, the next best method is to give exposures to the amount of three pastille doses three weeks, or a month apart. Usually two such exposures will produce a cure. Where the cosmetic effects are not to be considered one large dose sufficient to destroy all of the cancerous growth is very often advisable.

In cases where there is deep infiltration of the cancer cells the ideal method is long exposures (equivalent to three or four pastille doses) given through a filter of aluminum 0.2 of a millimetre thick, using a tube of high vacuum.

The advantages of the Roentgen ray in the treatment of skin cancer, are as follows: We are able to cause the degeneration, and destruction of the cancer cells, without destroying the healthy tissue. It leaves very slight scarring, therefore its use is often desirable for this reason.

In dealing with growths which are so extensive or involve such important structures that their removal would be impossible, its use is to be preferred above all other lines of treatment. In those cases where the cancerous cells involve deep

structures and a cure is uncertain we have in the X-ray the best method of treatment; it relieves pain, retards the growth, prolongs the life of a large number of our patients, and if vigorously and persistently carried out a few cases are permanently cured.

In treating keloid the X-ray offers the best method of producing a cure, and should be used in every case where any line of treatment is given, particularly after excision the field should always be exposed to the X-ray to prevent its recurrence. When the X-ray is the only treatment used a full pastille dose should be given every ten to twelve days till the desired results have been accomplished. When this method of procedure is properly carried out all keloidal tissue is destroyed leaving only slight scarring and in the majority of cases a quite soft cicatrix.

In the treatment of milder cases of acne rosacea and rhinophyma, the correction of the aggravating causes is all that is necessary, but in those cases where telangiectases have developed, the sebaceous follicles are enlarged, the pores have become patulous, the formation of connective tissue hypertrophy has taken place, the X-ray properly used offers the best means of improvement.

Cases of intractable pruritus can find their way as often to the dermatologist as to the surgeon. Though in the majority the correction of the rectal trouble is the only means whereby any permanent cure may be obtained. There remains a large group of cases in which all known causes can be excluded, and yet, the itching persists. It is in these cases that striking benefits may be obtained from the application of the X-ray. The treatment by this method should consist of small doses repeated every three or four days, never giving enough to produce erythema.

The descriptions of the treatment of these conditions are typical of others, and show in a general way the management that should be carried out in all conditions of similar character. As we become more familiar with the mechanism and properties of X-ray we will continue to progress in its application in the treatment of various diseases.

In conclusion I would say that both from my own personal experience and that of the leading dermatologists both in this country and in Europe, I consider the

X-ray judiciously used among the best of our remedial agents in dealing with a large number of dermatological lesions. 905-7 Empire Life Building.

THE FLY*

A. Fleming, M.D., Waycross

There are many species of the fly, but the species found in all parts of the world and in the most numbers are called "Musca Domestica", or common house fly. Dr. Howard suggested the name of typhoid fly, which caught the popular fancy of all, and aided in fixing the insect's proper status. This type of fly cannot bite, but sucks its nourishment through its mouth. It lays its eggs upon the excrement from human beings decaying animal and vegetable matter. Each female lays about 120 eggs, which hatch in eight hours after being laid. The larvae period lasting five days, and the pupa five days, making the time for developing a generation (under favorable condition) ten days.

Dr. Howard, of the Bureau of Entomology, points out that in the climate of Washington, twelve generations of flies are produced in a single summer. I have copied the following from The World's Work: As one fly will lay 120 eggs the result, if all of these should hatch and reproduce their kind in like ratio, would be appalling. The progression carried out by raising 120 to the twelfth power gives a total possible progeny from a single fly of 1,096,181,249,310,720,000,000,000,000, and as each female fly usually lays four batches of eggs, their unchecked development through twelve generations would make a mass of flies that would measure 263,778,165,861 cubic miles, or considerably more than the total mass of the earth. Now this gives us a little of its history. We know the place of its birth and its habits, and how prolific it is. Is there any wonder that old Dr. I. Em Hetop, that great physician to the Egyptian King Pharoah, threw up his job and told the king that he had better get Moses to pray that the flies might be destroyed. It has been only a few years since we recognized this insect as a dan-

* Read at meeting of Eleventh District Medical Society, St. Simon's, June 18, 1912.

gerous germ carrier. We used to think that possibly he did good, as he was always into something filthy. He is always in the way.

It has been proven that he is one of the most, if not the most, dangerous insects we have today. The spread of infections and contagious diseases can be, and is being traced directly to the house fly, with yellow and malarial fever and possibly a few others. There is no doubt in my mind that we have now hundreds of people who are suffering with venereal disease, that if the truth was known, the house fly deposited the germ. These venereal troubles are certainly prevalent enough when contracted by co-habitation, but when it is known that the fly are carriers of this germ, then we ought to give the fellow some consideration, when he asks you if a fellow can catch it in a closet. We used to laugh at the poor fellow, but now we speak kindly to him, and ask him if he saw any flies around?

When I was a boy, if a fly dropped into my gravy or got stuck into that good old Georgia molasses, I took a piece of bread or my finger and pushed him gently out of the way and went right on "soppin'". I didn't even want to hurt the little fellow—just wanted him out of the way, and thought no more about it. Since I have been introduced to its mother and found out about its ancestors and that they carry on their feet and legs and alimentary canals millions of the most deadly germs, I stop and wonder which "pile" he came from and how many sick people he has already visited.

No physician who understands the germ carrying proclivities of the fly, when treating patients who have infectious or contagious diseases can fail to leave strict orders in regard to same. No surgeon would dare operate when there was any possibility of a fly dropping into the field of operation. This question has been asked ten thousand times, Where did he or she get it? The doctor said it was floating in the air, but didn't know the floats were in the shape of a house fly. We little thought then that the pestiferous and supposed harmless little house fly, with its hollow feet and hairy legs, after having sucked the pustules of a small-pox patient, was caught up and wafted away to scatter disease and death in other localities.

ECLAMPSIA*

M. M. Johnson, M.D., Waycross

There is probably no condition which makes the obstetrician feel as much at sea as that of eclampsia. There is a good reason for this. There are symptoms complex grouped together under the term eclampsia puerperal. The pathology and the pathological chemistry are not very well understood, and there is no accepted line of treatment. A nephritic woman may not necessarily have convulsions; as a rule the chronic nephritic woman does not, but anasarca, uremia without convulsions, pulmonary oedema, cardiac paralysis, cerebral hemorrhage, etc., cause us to interrupt the pregnancy. When they do occur and are uremic in origin, they require about the same treatment as does uremia in the man.

A pregnant woman may acquire an acute nephritis from the same cause a man would. The kidneys, however, are more susceptible to outward influences and more readily undergo changes; so, too, are there nervous systems more labile and unstable, resembling in this respect the nervous symptoms of children. For these reasons acute nephritis is more likely to occur in the pregnant woman, and when it does, convulsions will likely be prominent. Owing to the disturbances of the abdominal circulatory system, the fetal metabolism and the woman's own increased metabolism, the inflammatory reaction is likely to be more stormy and recovery improbable or delayed. When the uterus is emptied this handicap is removed, and the kidneys much more rapidly return to their normal function, hence its advisability.

One may watch his cases closely and make regular examinations of the urine, and then have an explosion come without much warning as if a bolt from a clear sky. They are from an acute nephritis which followed an exposure to cold, a flagrant error in diet, as a Christmas dinner, or an attack of angina. It is not always easy to differentiate these from a true toxemic eclampsia.

Toxemia in pregnancy means that certain poisons are being developed in the woman which is not being eliminated by the excretories of the body, and, there-

* Read at meeting of Eleventh District Medical Society, St. Simon's, June 18, 1912.

fore, accumulate in the blood. This toxemia resembles very much that produced by certain alkaloid poisons. The patients look as if they were drugged, but the chemical reaction of the poison where made, how absorbed and how eliminated and the physiological action is little understood.

Now in the second class of eclamptics we find edema of the extremities and eye lids, a pale, waxy skin, hard, bounding pulse, small amount of urine, albuminuria, diminished urea, low specific gravity, hyaline and granular casts. The patient later complains of spots before the eyes, headache, nausea and vomiting, pain in pit of stomach, sleeplessness, etc. Before the actual outbreak or the convulsion appears the headache becomes worse, it becomes intense, the patient sees spots before the eyes or colored lights, or becomes blind, and rapid running thready pulse and muscular twitching herald in the storm and consciousness is completely lost. In these cases one is led to believe the system is suffering some form of tox. in which the kidneys are trying to get rid of and failing to do so the poisons accumulate in the blood until tolerance of the nervous system is overcome.

The treatment of eclampsia is based on an entirely empirical foundation. One can speak of a rational method of treatment only when the cause is known.

More can be accomplished by prophylaxis than by treatment. We are much handicapped after the convulsions occur, because the nervous balance is overthrown.

We cannot prevent the action of the primary cause of eclampsia since we do not know what it is, but by carefully watching the woman we may discover the first manifestation of trouble and either ward it off, or interrupt the pregnancy before the disease reaches its climax. It is the pregnancy that favors the development of eclampsia, and if we cannot prevent and cure eclampsia we can remove the pregnancy. If the uterus is emptied before the convulsions occur the recovery is usually prompt. If the earliest signs of the impending catastrophe is discovered, emptying the uterus will almost always prevent a fatal issue.

It is a well-known fact that the pregnant woman is neglected, and the physician considers his attention at the time of delivery most important function he has to perform when his duties should begin early

and continue real and active till both mother and babe are through the puerperum.

Every pregnant woman should engage her physician early and place the responsibility on him. At his first visit he should inquire into a complete history of the patient and family. Did patient's mother have eclampsia? Did her parents have infantile convulsion? Were they alcoholic, insane, or neurasthenic, or was there any nervous instability? A hereditary instability of the nervous system may declare itself by abnormal metabolism which reaches its acme during the crucial test of pregnancy.

Treatment.—When the convulsions occur, or have occurred as we generally find, being advised on our approach as was said by Dr. Vinsen that the woman would be all right if she would quit having fits, we must be ready to meet the emergency and relieve the convulsion. Prevent the patient from doing herself injury. Prevent her from biting the tongue by inserting a spoon handle, cork, or clothes pin properly wrapped. See that the tongue does not drop back into the glottis, and in case it does, pull it forward with finger or forceps. Give inhalations of chloroform until the paroxysm pass off, then give heavy dose of morphia; at least a half grain, and chloral per rectum, about twenty to thirty grains. It is readily soluble, and may be given with small urethral syringe. The morphia may be repeated as indicated, giving as much as three or four grains in twenty-four hours.

Then look to the elimination which is best done by large doses of calomel, giving in extreme cases as much as 15 grains, which may be given in powder on tongue where it will be absorbed by the mucous membrane, and not being necessary to be swallowed. Produce rapid and copious evacuation of the bowels. If the patient cannot take heavy doses of magnesium sulphate it may be administered through stomach tube, or one or two drops of croton oil may be given on the back of the tongue in olive oil. Encourage the action of these cathartics by the administration of high saline enema.

Diuresis must be encouraged to activity. This is facilitated by the hot pack and by hypodermoclysis of saline in the nates or under the breast or at other points that might be preferred. The hot pack with

brisk rubbing of the skin. Medicinally the citrate of lithia with the infusion of digitalis and the citrate of potash and spirits of nitre will serve you well. Veratrum viride in doses of fifteen to twenty drops until the pulse rate falls to about sixty and the nervous tension will be relieved by heavy doses of gelsemium.

Empty uterus as quickly as possible, the various methods will not be discussed, as the individual case will suggest the best which is known to all, but do give special attention to prevention of mutilation of generative organs.

THREE CASES OF INTESTINAL OBSTRUCTION, WITH OPERATION*

T. J. Carswell, M.D., Waycross

First

Obstruction due to gut being looped round Meckel's Diverticulum.

Patient, female, aged 2 years. History of severe colicky pains in abdomen when child was three months old. On this occasion the child had high fever, vomited for three weeks, passed pus from the intestines. Had a definite tumor at umbilicus. At fourteen months the child had a similar attack.

One afternoon about 3 o'clock I was called out in the country about twelve miles to see the little patient. I found her with a temperature of 105 and was unable to count the pulse. Pupils dilated and eyes set in their sockets, abdomen dome-shaped and very tense. Child had been vomiting for ten days and there had been no bowel movement for nine days. Had continually cried with pains in the abdomen. Child then was vomiting dark greenish fluid with a fecal odor. I promptly told the people that the baby would die, no matter what was done, made a diagnosis of intestinal obstruction and had the little fellow removed to the hospital at Waycross. Opened up the abdomen at 9 o'clock that night and found a diverticulum about five inches long arising from the convex side of the small intestine, about fifteen inches from the ileocaecal valve and inserted at the umbilicus. At the insertion there was a well defined abscess containing about two ounces of

pus. The small intestine was looped about this diverticulum and this in turn caused traction in such a way that the intestine at the origin of the diverticulum kinked or twisted on itself so as to form a complete obstruction. The pus was evacuated, the diverticulum at its origin removed in the same manner that an appendix is removed. The pus sac dissected out and the abdomen closed, there being no gangrenous condition of the intestine. The child died promptly at five next morning.

Second

Obstruction due to small intestine being looped about Meckel's Diverticulum.

Patient, female; age 22; married one year. History of two previous attacks. She was married in January, 1911, and nothing uneventful occurred until June of that year, at which time she had a fall from a buggy. Then Dr. E. P. Little, of Manor, was called to see her and found no visible signs of violence, but patient was suffering with severe pains in abdomen, had high fever with nausea and vomiting. The fever, nausea and vomiting persisted for about three weeks; then the fever and pains left her, but the vomiting continued and occasionally she would have a little fever. In the meantime she had become pregnant and Dr. Little attributed the gastric disturbance to the pregnancy. On the 27th of October she had a miscarriage, being about six months pregnant. At this time she had severe pains in the epigastrium, fever, nausea and vomiting. Was very much constipated. From time to time after that she would complain of severe pains in the abdomen about the region of the umbilicus, would vomit considerably, would run a temperature for a day or two and would then be in fairly good condition for a week perhaps.

On January 1st of this year she became nauseated, had considerable pain in the abdomen and vomited. On January 2d the pain became more severe and was paroxysmal. The lower bowel was evacuated and the vomiting became more persistent with increased severity of the pains. Her temperature began to rise, going as high as 101. The pulse became rapid and weak. No further evacuation of the bowel could be obtained and the patient gradually grew worse, so on January 10th, at 11 p. m., Dr. Little called in Dr. J. H. Latimer. Diagnosis of appendicitis was made, an operation was advised, and

* Read at meeting of Eleventh District Medical Society, St. Simon's, June 18, 1912.

the patient moved to the hospital, being admitted at 6.45 on the morning of the 11th. Thirty minutes later I saw her with Drs. Latimer and Little, and found the following conditions:

Temperature 99, pulse 100 and very feeble, respiration 20, pupils dilated, patient very nervous with an anxious expression about the face, abdomen distended symmetrically, a general hyperesthesia over the abdomen, but no distinct spot of tenderness. The abdominal muscles were rigid, but no tumors, hardness or induration could be detected. The rigidity of the muscles was persistent. Nothing could be obtained from percussion, nothing from auscultation, nothing from vaginal examination. When asked where she had pain, the reply was, right here in my side, placing her hand directly over McBurney's point, but, she said the pain is not there now. It has moved and is now in the pit of my stomach, placing her hand just above the umbilicus in the median line. Is the pain a sharp, cutting pain, or is it a dead, aching pain? The reply was, I just feel like I am dead right here, placing her hand just above the umbilicus. She gave a history of having had paroxysmal, sharp, cutting pains, but now just a dead feeling above the navel. She heaved up some stercoraceous vomit. Evidently there was an obstruction, but where and just what was the cause was the thing that sorely perplexed me. The patient was immediately taken to the operating room and the abdomen opened, making the incision two inches to the right of the umbilicus, extending two inches above and two below the navel. The appendix was examined and found to be in good condition. The finger was passed around the region of the umbilicus and there the trouble was located. A diverticulum about ten inches long arising from the convex side of the small intestine about twenty-two inches from the ileocecal valve and attached to the umbilicus by a fibrous cord, formed from the obliterated tip. (This structure is due to persistence of the vitelline or omphalomesenteric duct, coming off from the ileum about twenty inches from the ileocecal valve. This duct should be obliterated in the eighth week of fetal life.) This diverticulum had a mesentery similar to that of an appendix. The small intestine was looped about this diverticulum in such a way as to completely obstruct the bowel,

but not tight enough to cut off the circulation. The intestine was freed and the diverticulum was removed from the navel by simply severing the cordlike end; and from the intestine in the same manner that you would remove an appendix. Wound closed, using a cigarette drain, and the patient made an uneventful recovery.

Third

Obstruction due to knuckle of small intestine being caught in the kink of a twisted pedicle of a dermoid cyst of the ovary.

Patient aged 23, married, one child. Previous health good with exception of pain in region of appendix occasionally.

April 15th Dr. W. M. Folks and I saw the patient with Dr. J. H. Latimer, and found the following: Temperature 101, pulse 132, respiration 22. Nervous, thirsty and a feeling of general uneasiness. She claimed to be three months pregnant, but the uterus was the size for a six-months pregnancy. Had some pain in the left lower quadrant, was nauseated, but had not vomited. Abdomen was distended and muscles very rigid, more marked rigidity on the left side. Patient said she felt as if she was going to die. We agreed on a diagnosis of accidental hemorrhage and advised an immediate evacuation of the uterus. The patient was sent to the hospital that night and at 7.30 a. m. A Voorhees' hydrostatic bag No. 1 was introduced and gentle traction was exerted every twenty minutes. Labor pains immediately set up and at 11.30 the bag was expelled. The pains continued, gradually growing harder and coming more frequent. At 12.30 a three-months foetus was expelled together with a large quantity of blood clots, showing that there had been a hemorrhage. A curettage was given and the uterus packed with plain gauze. Pulse went up to 150 and a continuous rectal irrigation was given for six hours. This was the 16th and on the morning of the 17th the temperature was 101.2-5, pulse 126, respiration 28. I left for Augusta that night to attend the State Association and did not see the patient again until the 20th at 6 p. m. Then I found the patient with temperature 99.3-5, pulse 128. She had been vomiting for 72 hours with severe pains in the abdomen. Had been given calomel and epsom salts galore, enemas and rectal irrigations, but the bowels refused to move. The pain per-

sisted in spite of the morphia that had been regular and religiously given. The vomit was now stereoraceous. The abdomen was now relaxed, in fact the entire patient was so relaxed that I was fearful that she had lost her grip and might slip away. I went over the abdomen and was able to outline a definite tumor on the left side extending well above the level of the umbilicus. Diagnosis of obstruction was made and an operation advised at once. Not knowing what to expect, a good free incision was made directly over the tumor. This was directly over the left rectus muscle, which was pulled aside from its sheath, and the abdominal cavity entered. A large bluish-looking tumor was exposed, which proved to be a pedunculated dermoid cyst of the ovary having the pedicle twisted on itself and then kinked in such a way as to tie off a knuckle of the small intestine, thus obstructing the intestinal tract. While this pedicle was twisted tight enough to obstruct the gut, yet the kink was not tight enough to cut off the circulation of the intestine. The tube on that side was also bad, so the cyst, ovary and tube, all three, were removed en masse. The cyst weighed three pounds three ounces. On May 1st, ten days after the removal of the cyst, the patient was discharged, and is now doing her own housework and enjoying excellent health.

TREATMENT OF PELLAGRA WITH REPORT OF TWELVE CASES*

J. E. Knight, M.D., Waycross

1st Case.—John S.; male, about 38 years of age; seen at A. C. L. Hospital about March, 1911. Physical examination showed dermatitis on the hands and face and denuded mucous spots in mouth. History of diarrhea worse in spring and fall. Trouble started about two years before. Treatment consisted of a purge of oleum ricini on admission to the hospital. Next day was put on the sulphocarbolates gr. X. Fowler's solution gtts. 3 t. i. d. Fowler's solution stopped at the end of the first week. Diarrhea bad, but controlled with bishth-subnit. All corn products withdrawn from diet. Case was showing marked improvement of all symptoms, but decided suddenly, at the end of the sec-

ond week, to go home. Was unable to get a further report of the case after this.

2d Case.—Mrs. W.; age 28; mother of two healthy girl children. Sickness started spring, 1910, was seen first, April, 1911. Examination showed dermatitis on hands and labia. Denuded mucous membrane of mouth; no diarrhea, but oftener constipated. Was unable to walk over a block from home on account of weakness. Patient somewhat emaciated. Suffered also from dysmenorrhea. Oleum ricini used as a purgative and repeated as needed. Bromides given at the time of menstruation. Fowler's solution gtts. 3 to 5 for the first three weeks, but showed no change. Sulphocarbolates gr. 10 t. i. d. then added. Change for the better after the first week. Fowler's solution dropped about this time and only sulphocarbolates given. After ten weeks' treatment all dermatitis disappeared and patient gained in weight and strength. At the present date, a year has elapsed since any sign of the old trouble had returned. Dysmenorrhea corrected itself as the general condition improved.

3rd Case.—Alfred C.; age 40; first seen in June, 1911, at the A. C. L. Hospital. Physical examination showed a symmetrical dermatitis on the back of both hands extending half way up the forearm. Slight dermatitis on both feet, both cheeks and back of both ears. Mucous membrane of mouth nearly all gone, mouth presenting appearance of a piece of raw meat. History of diarrhea starting in the spring of 1909. Appetite good, but digestion poor. Decided to treat this patient with cacodylate of soda and arsenite of iron. P. D. ampoules were given on alternate days for six weeks. At the same time a R of Fowler's solution and K. I. was given in ascending doses. Diarrhea was very troublesome and bismuth failed to control, and at times had to resort to tincture of opium. Dermatitis was very troublesome until he started bathing the places in saturated solution of magnesium sulphate and keeping the parts protected from the air. After about six weeks of the above treatment, with no improvement, the arsenic was all stopped and the man put on sulphocarbolates. At the patient's request, however, hypodermic injections of cacodylate of soda and arsenite of iron was resumed twice a week. Patient now improved rapidly and had hopes of getting well. Early in 1912 nervous and mental symptoms be-

* Read at meeting of Eleventh District Medical Society, St. Simon's, June 18, 1912.

gan to be marked and in March of this year became violently insane. He is now an inmate of the State Asylum.

4th Case.—Mrs. C.; age 38; wife of last case. Was seen first in her home in April, 1912. Mrs. C. is the mother of three children by her first husband, who is now dead, and six more by her present living husband. On careful examination found only a slight trace of dermatitis, but mouth showed denuded mucous membrane in several places and some small ulcers. Diarrhea present. Dermatitis first noticed by her in September, 1911.

5th Case.—J. T., age 20; oldest son in above case by first husband. On questioning patient found history of diarrhea and dermatitis on March, 1911. This cleared up so consulted no physician. Symptoms returned however in February, 1912; continued to grow worse until April, when he consulted a physician. Examination showed marked dermatitis on both hands and diseased mucous membrane of mouth; history of diarrhea.

6th Case.—R. T.; boy age 18; very anaemic and poorly nourished. Symptoms same as brother's, except more marked. Trouble started in May, 1911. Returned in April, 1912, when he came to me for treatment.

7th Case.—Sallie T.; girl, age 17; sister of above case. Gave history of diarrhea and sunburned hands just like her brother's. At time of examination no dermatitis but diarrhea present; mucous membrane of mouth gone in several places and a few ulcers still present.

8th Case.—Lizzie C.; girl, age 11; oldest child by second husband. Dermatitis on hands, cheeks and feet. Diseased mucous membrane of mouth and marked diarrhea. Physical examination shows a very poorly nourished child with a mitral regurgitant lesion. Pellagra symptoms first seen in April, 1912.

9th Case.—Mattie C.; girl age 9; dermatitis of hands and face very marked. History of diarrhea, mouth showed diseased mucous membrane. Symptoms noticed first in April, 1912.

10th Case.—Riley C.; boy, age 8; dermatitis on hands, diseased mucous membrane of mouth, diarrhea. Symptoms first appeared April, 1912.

11th Case.—Mathew C.; boy, age 6; same condition and history as case just cited.

12th Case.—Rafford; boy, age 4; marked dermatitis on hands and feet. History of diarrhea and denuded mucous membrane of mouth. Symptoms first started April, 1912.

Examination of the last ten cases, which were all in the same family, showed all but the mother infected with hook worm. One child also infected with ascaris lumbricoïdes. In addition to treatment for hook worm these patients were put on oleum ricini (and when this was impossible magnesium sulphate) and sulphocarbolates. No other medicine was given but all corn products were withdrawn from their diet. About the latter part of April they began to improve and by the last of May not a single particle of dermatitis was present on any of them. The diarrhea had checked and the mucous membrane of the mouth showed a much healthier condition.

In all of these cases when the sulphocarbolates were given, Abbott's combination known as the W. & A. Intestinal Antiseptic was used. In conclusion, wish to say that while I do not think the line of treatment I am using is infallible I do believe that if taken early and considered as an intestinal indigestion caused by corn products Pellagra can be successfully handled. As the case progresses the nervous system becomes markedly affected and in direct proportion to this will be the numbers of cures or failures.

Arsenic in all its forms, both simple and complicated, has been repeatedly tried in the treatment of this disease and has proven a failure. While I do not wish to detract from the merits of arsenic when used as needed, in Pellagra it has been weighed in the balance and found wanting. In view of these facts I make the plea that arsenic be discontinued in all of these cases where early improvement is not forthcoming and that the sulphocarbolates be given a fair trial.

A felon may frequently be aborted by covering the end of the finger with cotton saturated in alcohol and protected from the air by a rubber finger cot.—American Journal of Suregry.

THE RELATIONS OF THE EYE TO DISEASES OF OTHER PARTS OF THE BODY*

B. H. Minchew, M.D., Waycross

As an index to diseases of other parts of the body, no organ in the whole structure contributes as many reliable symptoms, and differential points to aid the physician in a correct and accurate diagnosis, as does the eye, nor does any other organ of the body, share the burden of disease of the whole system to as great a degree as does this member. Peculiar in itself, this organ has many distinguishing features in its anatomy. Every cell with the single exception of osseous matter, that may be found in any other part of the body, can also be shown in this little organ. With the most intimate nerve distribution and richest blood supply, this organ stands alone in having within its structure, two members that have absolutely no nutritive forces derived from the blood current, and one member that has no connection with any nerve fibers. I speak of the cornea and crystalline lens, neither of these structures have a blood supply, while the latter has no nerve fibers. No other part of the body can claim as much constant activity, as some of the members and muscles of the eye. Imagine if you can how many times during the day, or even an hour, the accommodative effort of the ciliary body, iris and crystalline lens, forces a contraction, or dilation of these members to enable us to focus upon an object, with a radius measured from millimeters to miles. Even in apparent repose, when all other organs of the body are at rest, and only the imaginative mind at work, this phenomena of accommodation is still going on—focusing upon the imaginary objects, whether the size of a mountain, or of microscopic smallness. Can we wonder, then, why an organ with anatomy and histology akin to every structure within the body, may not be affected with relative pathology when other members of the body are primarily diseased, and especially when we consider the amount and peculiar nature of the work this organ has to do. This in some measure may explain why such disaster is often wrought to this member, in diseases that may be simple in other parts of

the body, the fact that an uncovered eye without a complete paralyzation of the muscles of accommodation is constantly active, and no effort is offered nature for relief; then, too, the diseases of the eye usually follow a systemic condition, or a local infection that produce general sepsis, either of which leaves a low opsonic index with all the vital forces and resisting elements almost nil. Consider any of the infectious diseases of childhood, and imagine what chance the cornea, or iris may have to antagonize a local infection of similar character, after the effects of the general infection has played such havoc with the resistant forces of the blood. Is it any wonder that a corneal ulcer following small pox, so often results into perforation, with a loss of the ocular contents and total blindness, or is it strange why such a violent infection of the conjunctiva, may follow diphtheria. Weeks states that the Klebs-Loeffler bacillus is not pathogenic to the conjunctiva unless the mucous membranes are infected or in a favorable condition for infection, meaning a low blood resistance, in fact it would seem that the eyes are able to take care of themselves if free from a systemic condition, but the sad fact that ninety per cent. of all diseases of the eye are traceable to infection at some other part of the body, either before the symptoms appear in this organ, or during such attack, makes it important to consider the symptoms associated with this member.

As stated in the opening of this paper no organ contributes as many differential points to diagnose diseases of other organs of the body as does the eye. It is to this organ that the surgeon first directs his attention, when in the presence of a patient unconscious from a blow or fall when the condition of concussion or compression or both may be present, and this organ, by its appearance, can eliminate or confirm one of these conditions to a certainty. When the physician is called to see a patient in a state of coma, he can often determine the nature of such, by an examination of the eye, and with the attempt at suicide, this organ often furnishes evidence of the poison selected, and the antidotes administered may be the means of saving the worthy citizen. The obstetrician may depend largely upon the faint glow, or momentary blindness occurring in pregnancy, and especially in the primipara, as a symptom of albumuria with the result-

* Read at meeting of Eleventh District Medical Society, St. Simon's, June 18, 1912.

ing congestion of the retina preceding albumuric retinitis. This symptom may be the first to direct the attention of the obstetrician to such a condition, and early treatment ward off the distressing hours of labor with eclampsia, or the unfavorable convalescence in the presence of puerperal mania. In mentioning the work of the obstetrician, one point of particular interest that I wish to mention, that occurs during the experience of most practitioners who do extensive obstetrical work, and that is the cyanosis of the lids and conjunctiva of infants immediately after birth, which means a mixture of arterial and venous blood, due to an unclosed foramen ovale, and is explained by the fact that the arteries have carried this mixed blood in its current and it only presents itself in cyanosis in this flabby loose tissue, where the blood pressure is very low and cannot be carried away by the current, or be deposited in a dense muscular area where it would be unnoticed. This same construction of the lids explain why these members show a congestion from most operations or slight trauma in this territory, when the surrounding area may be absolutely clear.

The eye shares the burden of so many diseases affecting other organs, that this paper shall only mention a few of them, and will deal mostly with those with which we come in contact most.

In typhoid fever we often see conjunctivitis, keratitis, optic neuritis, nerve atrophy, thrombosis of orbital veins, occasionally cataract, and a few cases of paresis of ocular muscles. Since the typhoid bacillus is present in all the tissues of the body to a greater or less degree, it is not strange that manifestations in the eye, particularly those connected with the blood vessels, are not uncommon. In the later stages of the disease enophthalmos from wasting of the orbital tissue may be seen, and occasionally superficial and deep keratitis from inefficient closure of the lids occur as a result of the exposure of this membrane. One redeeming feature of this disease rests in the fact that it does possess some therapeutic value according to one author, who noticed the disappearance of trachoma and the accompanying pannus during the course of a severe attack of typhoid fever.

Before the days of Jenner, thirty-five per cent. of the blindness in France was said to be due to small-pox and this fea-

ture alone, distressing as it is even now with the disease under control, warrants our profession to demand and enforce compulsory vaccination, fight every move of the "Anti-vaccination" and "Medical Freedom League". I think, too, the Government would go a long way in the preservation of health to its people if it would not permit the mails to distribute some of the weekly magazines from the north who take such a definite stand against progressive medicine. This, too, might affect one of our sheets in the south, which has such an unyielding position and accurate knowledge along scientific lines, and whose influence has been a great drawback to the eradication of the greatest scourge of the South. I would certainly welcome the day when the newspapers of our country are required to print news and not deal in scientific problems that affect the health of our people.

Small-pox produces the same pustules on the conjunctiva as appears elsewhere on the body, but this tissue does not suffer to point as does the cornea, the pustules on the latter membrane may penetrate deeply and perhaps leave an opacity on the cornea that interferes with vision, and not a few cases result in a perforation of the cornea with a loss of the iris, crystalline lens, vitreous, in fact all the ocular contents with total blindness. Retinitis, glaucoma, and paralysis of the ocular muscles have been observed.

Malaria does not present many eye symptoms or complications, although keratitis, optic neuritis and retinal hemorrhages may occur. Amblyopia may be present as a result of the amount of quinine taken. A few cases of rapidly developing cataract in unusual young patients has been observed with malaria.

A mild conjunctivitis usually accompanies lagrippe; this may, however, terminate into a serious infection and involve the cornea with the same disastrous results as often is the case with ulcers of other infection. Transient paralysis of the ocular muscle may occur. Paresis of accommodation has been observed; usually bilateral. Intense pain at the apices of the orbits lasting several days is often present. The optic nerve may show inflammatory symptoms, but this is thought to be an extension of the inflammation from the frontal, ethmoid and sphenoid sinuses rather than the presence of the influenza bacillus in the nerve affected.

All the anemias produce more or less eye complications, and especially retinal hemorrhage, and in this connection the question of the symptoms of the eye in hook worm disease may be discussed. Styles mentions a death-like glare of the eyes if the patient is required to focus upon one object for any length of time. He mentions also the slow dilatation and contraction of the pupils in patients affected with this disease. Horner and others mention a peculiar form of retinitis and choroiditis. These men, too, have noticed subretinal hemorrhage in a great many cases. Possibly all members of this society have noticed how easily the eyes with these patients are affected with any of the diseases common to this organ. This, I think, explains all the symptoms connected with this disease. I do not think anything unusual has been found in this disease that would not be found with any of the anaemias. We would naturally expect slowly acting muscles when they are deprived of a rich blood supply, and the death-like glare is nothing more than the patient feels, and none of the symptoms mentioned are more than we could expect with poorly nourished membrane. I do not wish to minimize the condition of the eyes in connection with this disease, in fact it is a grave matter when the entire system is so weak that a simple infection may result into disaster with any organ, and especially one that means as much to us as the member under discussion. I want to join heartily in the work of the State Board of Health, and I believe that department under the management of Dr. Fort, and the work carried out by Dr. Abercrombie and others, are doing the greatest work that has ever been inaugurated to eliminate a disease that makes the eyes, as well as every organ in the body easy prey to infection and disease.

It is needless for me to discuss the complications of the eye when associated with such disease as goitre. It is well-known what a distressing symptom the exophthalmus is. One case I remember seeing in the Wills Eye Hospital in Philadelphia, and am sure one other member of this Association present will recall the case, where both globes had almost entirely left their sockets and it was impossible for the lids to protect the cornea, and as a result deep keratitis was present with ulcers. The only protection that could be given the exposed surfaces was by placing a lubricated

gauze over the bulging organs. Am sure the work of Dr. Cushing in Baltimore will be interesting, when his work with the pituitary body for the treatment of this condition and nerve atrophy, is published.

Rheumatism and Bright's disease both cause a great deal of trouble when showing eye complications. In the former disease we find some of the most persistent cases of iritis. This is true because the general condition is so hard to improve. Nephritis produces all forms of retinitis and the "spokes wheel" of albuminuric retinitis is one of the prettiest pictures of pathology, and one that means most in the prognosis of the disease. The patient is usually marked to die within a year after the appearance of this symptom.

Iritis is the most important complication arising in connection with tuberculosis. This may be easily diagnosed by the arrangement of the nodules on the iris. Unlike the gumma of syphilitic iritis, which is always seen around the lens margin of the iris, the nodules of tubercular infection arrange themselves all over the surface of the muscle, and in many cases groups appear at different points, but never confine themselves to any particular margin or position as the disease above mentioned. This complication may, in a few cases, be demonstrated when only some isolated gland is the focus of infection, and pulmonary tuberculosis be aborted by early treatment.

The complications arising from gonorrheal infection is often so tragic that one will never forget the pathological picture. Then, too, any mention of this disease with its complications, so often brings into discussion the moral and social side of the question, that one hesitates to mention it before a body of men who sees the disasters wrought upon the innocent by this infection. Most of us have seen, I am sure, cases of gonorrheal-ophthalmia in men and women who never suspected the nature of the disease, and who in many cases were absolutely innocent as regards the primary infection. No doubt many of the physicians present, can bring to mind some child groping in the darkness of the blind, possibly in some asylum, made so by a guilty parent who selfishly made an existence in which the child had no voice or guilt in the making. It is hard to believe, even reliable statistics that gives gonorrheal infection on the part of the mother as responsible for 98 per cent. of

all conjunctivitis occurring in infancy before three days of age.

The same reliable clinicians make statistics show that syphilis and alcoholism is responsible for more blindness as a result of optic atrophy than all known causes of this disease combined. The same records show that syphilis is the cause of 75 per cent. of all cases of plastic iritis. Interstitial keratitis comes with the high mark of 90 per cent. with syphilis as the causative agent. This latter disease is one of heredity, and is so often accompanied by idiocy as a result of the same cause, that the case is doubly pathetic. It seems quite unfair to bring a child into this world with an inheritance of idiocy, but when all records show that blindness is likely to result, too, from interstitial keratitis, it seems time for the laity to clear themselves of a disease of their own making, and stop placing this condition at the feet of the physician as his problem. When the laity and the laymen shall follow their own knowledge of right and wrong, and take the advice of the physician as regards cleanliness, Neisser's Gonococci, and the Spirochetta Pallida will die of inanition, and for the lack of suitable fields for development, and until we, as physicians, can feel no apprehension at the outcome of the marriage of our innocent girls to a vigorous and healthy manhood, and know that the sins of the father will not be visited upon the sons, then, and not until then, will we have reached the ideal day.

THE SECOND DECLARATION OF INDEPENDENCE

(Long Island Medical Journal)

History has never before recorded a revolution of the medical profession of the character and extent of the present one which has taken place in England. For years the medical profession has been engrossed with its own affairs, searching for the means to bring the health of the people up to the highest possible point. From whatever point we view it, either from the humanitarian or the economic, its efforts have been met with wonderful success. One has but to review the triumphs of surgery, the blessings of anesthesia, the prophylactic power of various serums, the protection of quarantine, and the gradual elimination of filth, to realize what the

medical men have been doing, and, strange to say, they have had to work in the face of considerable opposition.

It has been a truly altruistic effort, for their own income is decreased in proportion to the decrease in disease. What has been their reward? At the present time they find themselves without representation in the government. They find that in the opinion of the government altruism is the one unpardonable sin in state politics. They find that all of their charity work in the hospitals and dispensaries counts for nothing but "experience". They find, in short, a claim that the state owes them nothing. They are simply a class, a useful and at times a necessary class, which can be used by the state in working out its own means for preventing the great labor unrest from overwhelming the government.

One form of practice which medical men have found to be detrimental to the best interests of both patient and physician is the so-called lodge or contract practice. This opinion formed after many years of observation is universally held throughout the world, and yet the Government of England, which in this particular instance means Mr. Lloyd-George, after a period of observation of about one year, has decided that contract practice will help to popularize the government in the eyes of the masses. So, therefore, they propose to coerce the medical profession and bid them bow before the powers that be.

Never before has the medical profession of a country been so united in declaring their independence as has that of Great Britain in refusing to comply with the measures set forth in the National Insurance Act.

Sir James Barr, president of the British Medical Association, has described the insurance act as "the most gigantic fraud ever perpetrated on a confiding public since the days of the South Sea Bubble".

The medical profession of this country admire the stand which the members of the British Medical Association have taken, and it is hoped that we may profit by the lesson which the present crisis in England teaches.

PAUL M. PILCHER.

It is extremely desirable to conduct a systematic and cleanly dissection when seeking a foreign body.—American Journal of Surgery.

THE JOURNAL OF THE MEDICAL ASSOCIATION OF GEORGIA.

300-302-304 Harison Bldg.

SUBSCRIPTION

PRICE.....ONE DOLLAR PER YEAR

SINGLE COPIES of this calendar year, 15 cents; of the previous calendar year, also 15 cents; two years old, 20 cents; three years old, 25 cents; in other words, 5 cents additional is charged for each year preceding the last calendar year.

REMITTANCES should be made by check, draft, registered letter, money or express order. **Currency should not be sent unless the letter is registered.** Stamps in amounts under one dollar are acceptable.

CHANGE OF ADDRESS notice should give both the old and the new address, and state whether the change is **permanent or temporary.** The change notice must reach us ten days in advance of the date of the issue which is to be forwarded to the new address.

WARNING: Pay no money to an agent unless he presents a letter showing authority for making collection.

ADVERTISEMENTS.

Advertising forms go to press eight days in advance of the date of issue. In sending in copy time must be allowed for setting up advertisements and for sending proofs. No proprietary medicines can be advertised until approved by the Council. Advertising rates will be sent on request.

CONTRIBUTIONS.

EXCLUSIVE PUBLICATION: Articles are accepted for publication on condition that they are contributed solely to this journal.

CONTRIBUTIONS TYPEWRITTEN. Authors should have their contributions typewritten—double-space and with ample margin—before submitting them. The expense is small to the author—the satisfaction is great to the editor and printer. We can not promise to return unused manuscript, but try to do so in every instance. Manuscript should not be rolled or folded.

ILLUSTRATIONS: Half-tones and zinc etchings will be furnished by THE JOURNAL when satisfactory photographs or drawings are supplied by the author. Each illustration, table, etc., should bear the author's name on the back. Photographs should be clear and distinct; drawings should be made in black ink on white paper. While we cannot guarantee to return used photographs and drawings, we use our best endeavors to do so after the article is published, if the word "return" is written on the back of each.

ANONYMOUS CONTRIBUTIONS, whether for publications, for information, or in the way of criticism are consigned to the wastebasket unread.

NEWS: Our readers are requested to send us items of news of a medical nature, also marked copies of local newspapers containing matters of interest to physicians. We shall be glad to know the name of the sender in every instance.

Criticisms of our hospitals are far from uncommon, but it has remained for a recent medical visitor to our land to pre-empt a discussion for and against our hospital system that has undoubtedly attracted more attention than any for many a day. Dr. Henri Neumann, the critic in question, is able to speak more authoritatively than most men, not alone because of his very considerable experience in hospital administration but also because of the careful study and investigation he has just made of our leading clinical institutions. In a way, the discussion—conducted in the main in the daily press—has been very amusing and our distinguished visitor in laying emphasis on the value of autopsies

was quoted, for example, to the effect that patients who went into European hospitals thoroughly understood on entering that a post-mortem examination would be made; that it was a rule of every institution, a matter of routine and patients had grown to expect it! It is perhaps facetious on our part to point out that a post-mortem examination is the very last thing that patients expect in entering our American institutions. And if autopsies are few and far between in the routine of our leading hospitals, is not this fact a matter for congratulation? Does it not offer a very significant as well as gratifying comment on the efficiency of our methods? Finally in saving a patient from the autopsy table—snatching, as it were, "a brand from the burning"—are we not approaching closer to the ideals of hospital treatment? But enough of this. Dr. Neumann undoubtedly simply intended to convey the idea that European patients felt quite differently toward autopsies, and unlike our American patients have been taught the desirability of post-mortem examinations when unavoidable conditions made them possible. Therefore, in spite of the ambiguity of Dr. Neumann's remarks—for which his interviewer must be blamed—his real intent is plain. Post-mortem examinations most assuredly are not pursued as they should be in our charitable institutions. While this is largely attributable to the widespread sentiment in opposition to post-mortem mutilation, and the consequent difficulty of inducing relatives to allow autopsies, it must be admitted that few of our leading clinicians exert themselves very strenuously in this direction. That post-mortem study is of great value no one will deny. As far as the people are concerned, autopsies are largely a matter of education, and as the benefits to science are emphasized their acquiescence is much more easily obtained. But the profession itself is very lethargic in this direction and until more zeal and ambition develop for post-mortem study, this important and highly productive field of investigation is bound to be neglected. It may be true, as some point out, that surgical progress has brought the various internal organs under such frequent scrutiny that autopsies are becoming less and less necessary. But the careful painstaking study of a cadaver offers opportunities for acquiring information, leisurely and thoroughly, that surgery can never supply. Some one has said

that autopsies are disappointing, they so seldom corroborate our diagnoses! Could a more eloquent argument be made in behalf of post-mortem examinations? Dr. Neumann has done us a real favor in showing this particular lack of our hospitals, and pointing out that in neglecting to secure an autopsy whenever possible we are losing one of the principal advantages of our public medical institutions.

Hospital efficiency very naturally came in for its share of consideration in Dr. Neumann's discussion and our methods of administration, system of medical service and general management suffered severely in his comparison with the methods and system in vogue in European institutions. While in these matters we are inclined to feel that our learned critic is perhaps somewhat prejudiced, and that the relative efficiency of American and European hospitals may very properly be looked upon as open to controversy, we are quite ready to admit that a great majority of our foremost American clinical institutions deserve criticism on more than one count. If our memory serves us right, moreover, the recollection of conditions noted only a few years ago in more than one prominent hospital in Europe leads us to believe that there may also be room for improvement in some of these institutions that Dr. Neumann considers so superior to our own. The fact is hospitals the world over are not measuring up to their highest efficiency, and while European institutions may be better conducted in some respects, and their administration generally be more satisfactory, in certain definite details they are no nearer perfection than those in this country.

One thing is certain, we are under no delusions as to the conditions that obtain in the administration of American hospitals. No smug complacency blinds us to urgent needs of improvement, and this recognition of the situation promises real substantial progress. The great drawback to greater efficiency, in this country at least, has been lack of public interest. In many communities the hospitals have been looked upon as institutions provided mainly for medical benefit and convenience. This has largely come from the fact that in small cities the hospitals have usually been organized by medical men and kept alive by professional interest. Of course there are many exceptions and most institutions have sooner or later attracted

the attention and received the support of certain public spirited men and women of each community. But there is no denying the fact that the people at large have not taken the interest that they should in their local hospitals nor familiarized themselves with the ways and means of raising their efficiency to the highest. Until our hospitals become more public, in the sense that they must be better appreciated, their advantages more thoroughly recognized and more general and consistent support be given them, they are bound to fall short of accomplishing the good they can.

When we see how some of our hospitals have to struggle on with support so meagre that it is sometimes a marvel how they continue to exist, there can be little surprise that they have failed to measure up to every ideal. The real wonder is that they have done so much, have been conducted so well, and have been so free from gross abuse. It is a high testimonial to the medical profession of America that our hospitals have done what they have for the people in the face of opposition, prejudice, ignorance and indifference. The people are just waking up to what has been accomplished by earnest medical men, and while dissatisfaction with our hospitals is a good sign and augurs well for the interest and co-operation that is so essential to future progress, it should not be overlooked that most institutions have been seriously handicapped. Let us be tolerant therefore with the shortcomings of our American hospitals, and while welcoming the splendid prospects that promise such substantial improvements all along the line, never fail to realize the good honest work that has been done day in and day out for years—and this in spite of indifference, ignorance and deep rooted prejudice on the part of many who instead of upholding and aiding the hospitals of their communities have been most active in opposing them. Criticism is good if kindly and well intentioned. But in criticising the hospitals of America let us be fair enough to realize that the lack of efficiency we deplore has many times been due to conditions that have been unavoidable. As the people grow in intelligence and judgment many of these conditions are certain to disappear and on these grounds alone we have every reason to expect a gratifying increase in hospital efficiency—but it all rests on the people.—*American Medicine.*

NERVOUS AND MENTAL DISEASES

L. M. GAINES, M.D.
Atlanta

W. R. HOUSTON, M.D.
Augusta

E. T. GIBBES, M.D.
Gainesville

THE FAVORABLE EFFECT OF SALVARSAN IN TABES DORSALIS

A paper under this title is contributed by Doctor Leredde, of Paris, to the *Muenchener Medizinische Wochenschrift*, Nos. 38 and 39. He writes in part as follows:

"The curative action of salvarsan in tabes dorsalis is today assured. The injection of Erlich's preparation is capable of bringing about a cessation of the tabetic process; and more than this, this treatment is capable of affecting a retrogression of certain lesions that have their seat in the meninges, the nerve roots and even in the cord, a fact which is evidenced by the constant disappearance of recent and even of long standing symptoms. This gradual stoppage of the tabetic process I have been able to determine as occurring without exception in a number of cases which I have had occasion to observe and treat from the end of 1910 to April, 1912. In a small number of these cases the cure seems to be complete. In one case all symptoms have disappeared for eight months. The majority of my patients are on the way to a well marked cure; the most important symptoms have either disappeared or diminished. New symptoms of secondary importance have appeared very exceptionally after beginning treatment, and in all cases have vanished again after a fresh injection. Only one patient with a severe case of tabes failed to be benefited by the treatment. Even this could not be regarded as a failure in the ordinary sense, since the treatment could not be carried out under conditions with promised success.

"If we bear in mind the facts above mentioned and also the observations that I made at the annual congress in Rome, and which are repeated at the conclusion of this paper, the assertion appears not to be exaggerated that tabes, if only it be treated according to definite rules, is curable not only in special cases, but as the rule. It might at most be objected that

the number of cases of tabes treated according to these principles is still too small for us to be able to say, at the present time, that the cure of this disease will be absolutely constant. Will we not from time to time meet refractory cases? This is, indeed, possible, but according to my previous experience such cases must be extremely rare.

"The contradictory opinions that have been expressed regarding the effects of antisyphilitic treatment on tabetic patients, is to be explained very simply if we consider the variations in the method of employing mercury, for it is about the use of this drug that this discussion is waged.

"The majority of syphilographers and all neurologists have constantly employed mercury in small or trivial doses. They have treated the tabetic patient without conviction, without energy, and without constancy. Some have seen no results; others have observed transient improvements which they have regarded as spontaneous and incident to the course of the disease, a course which, as we know, is irregular, and which is interrupted by pauses and remissions. Some considered mercury as dangerous and advised against its employment. Neurologists have asserted that tabes today has a less fulminating course than formerly and some have explained this by the habitual antecedent use of mercury.

"Only the syphilographers who have used mercury intensively and continuously have confirmed the curability of tabes. The fact that tabes is curable by mercury made me conclude, in the year 1902, that tabes is a disease of a syphilitic nature, a conclusion which was denied by Fournier, who, on the ground of its incurability and the nonspecific character of the spinal lesions, regarded the disease as parasymphilitic.

"The proofs which at the present time demonstrate the syphilitic nature of tabes are as follows:

"(a) The constantly positive Wasser-

mann reaction in untreated tabes and the postive reaction usually found in the spinal fluid.

"(b) The presence of meningitis characterized by a lymphocytosis in the cerebrospinal fluid, which appears to be continuous with a meningitis present in the secondary stage, and to have antedated the phenomena in the posterior route and the cord.

"(c) The curability by antisyphilitic remedies.

"The mercurial treatment of syphilitic diseases of the central nervous system, and especially of tabes and dementiaparalytica, its most obstinate form, is constantly carried out inadequately. The neurologists have used mercury in much smaller doses than those which syphilographers employ in the treatment of the ordinary easily cured syphilis of the skin.

"The dermatological manifestations of syphilis are seldom obstinate. Syphilis of the nervous system would a priori be looked upon as very rebellious to treatment and as demanding the most intensive medication. It is easy to forstall relapses of cutaneous syphilis, while cerebrospinal syphilis on the other hand is characterized by its tendency to relapses. Finally, in a patient with a skin affection we may at any time increase the dose if the lesions resist the treatment ordinarily employed; in a patient with cerebral syphilis which shows new symptoms, it is often too late for more vigorous therapeutic procedures. The new symptoms which correspond to new pathological lesions may, for instance, be occasioned by the final closure or rupture of an artery.

"This lack of logic in technic and methods which is to be met with everywhere in the mercurial treatment of lues of the central nervous system was at first repeated in the employment of salvarsan. Salvarsan was given in small doses. In many cases a single injection was allowed to suffice and the remedy was employed without persistence. Consequently, it was concluded that salvarsan was incapable of curing tabes or that the transient improvements were perhaps not to be ascribed to the medicine, but to a spontaneous remission of the disease. Some have even written that salvarsan acts like any other medicine. Among the cases in which an improvement was observed there are certainly some in which the improvement lasted only for a short time after the

treatment, so that the idea of a spontaneous remission seems probable. Among these cases some, moreover, were to be observed whose symptoms belong to the class generally considered as definitely incurable because of their degenerative character and yet these symptoms either showed an improvement or totally disappeared. In cases that were not treated by antisyphilitic remedies no one has ever described either the spontaneous disappearance of symptoms, the return of the patellar reflex, of the pupillary reflex, or any considerable diminution in the disturbances of co-ordination. The contradictory views that have been published up to the present time may be in general formulated as follows: Salvarsan appears to exercise a curative effect on tabes, but this effect is far from being constant or definite, especially when we bear in mind the spontaneous remissions that occur in the tabetic. If, however, we consider the question from the standpoint of a proper therapeutic procedure and divide the tabetic into two groups, those that have been treated insufficiently, I might say incorrectly, and those that have been treated for long periods and with normal doses, all uncertainty at once vanishes. The curability of tabes by salvarsan is instantly put beyond question, and we learn to regard this disease as an extremely obstinate form of syphilis which must necessarily be treated with a corresponding vigor.

Rules for the Treatment of Tabes with Salvarsan

"The sterilizing action of salvarsan in animals is constant only in the dose of 0.01 g. per kilo of body weight (Ehrlich Hatta), the normal dose.

"In tabetics the preparation must be used in the same dose. And in a man or woman of 60 kilos (132 pounds) the dose to be injected should be 0.6 g. or more. The sterilization of lues in man is much harder to obtain than in the animals. After a single injection even with a dose of 0.01 g. the cure of the visible phenomena is not always complete and, furthermore, a local crudescence is possible. Hence, it is necessary to employ multiple injections. Since salvarsan is not immediately excreted an interval of eight days between the single injections is indicated.

"It is a dictate of prudence at the beginning of treatment not to employ salvarsan in the normal dose. The acute

meningeal symptoms arising from a Herxheimer's reaction appear to be less formidable in tabetics than in the primary stage or at the beginning of the secondary stage. Westfall, however, has described a case of tabes, in which twelve hours after an injection of 0.4 g. of salvarsan death resulted from paralysis of the diaphragm. It was an old case in which at autopsy a fresh invasion of spinal meningitis was found. Other cases of tabes that ended fatally after an injection were cachectic persons or those with severe complications, such as myocarditis or pyelocystitis. Hence the first injection should be a smaller one and, at the beginning of the treatment, instead of giving three injections of normal doses, four should be given of 0.2, 0.4, 0.6 and 1.6 g., respectively. If one of the injections induce headache or a marked febrile reaction, the next dose should not be increased. By using these proportions I have as yet seen no case in which the rise of temperature was not decidedly less at the next injection.

"In the second course of treatment three injections of 0.6 g. should suffice. But, if in course of the first series the elevations of temperature have not entirely disappeared, or if a considerable time has elapsed between the first and second course, the second series should be started with 0.4 g. As already suggested, the treatment is carried out in a series of courses. The intervals between the courses should be at most two months. Yet, I believe it is of advantage to intermit only one month in order to shorten the duration of the treatment, which may be very long since it must be continued to the point of a complete cure. As in all forms of syphilis the treatment of tabes must be carried out as indicated by the results of the Wassermann reaction in the blood. The aim of the treatment is to bring about the disappearance of all symptoms of syphilis and primarily of the serum reaction, which is the most important of all. Before each series of injections the Wassermann test should be made. In my experience it is extremely difficult with cases of tabes to attain a change of the Wassermann reaction from positive to negative. In one of my patients after four series of injections of 0.6 g. it still remained very strong; in another it varied in the course of the treatment and is not yet negative after five

series of injections. On the other hand, in some cases it becomes very promptly negative. I have already mentioned one patient in whom the reaction became negative after three injections and I may add another similar observation; this was a poorly marked case of tabes in which the Wassermann reaction at the beginning of the treatment was very weak.

"In general it may be said that even clinically there exists a great difference between tabetics, whose serum reaction is generally positive, and those in whom it is negative. In the latter case we are dealing always with patients who have received long and energetic mercurial treatment. However, a case of tabes with negative serum reaction, does not always mean a case that is no longer progressive. I have frequently observed patients who, despite a negative reaction, showed new symptoms, such as pain, and lately, one in whom the inco-ordination was making rapid progress.

"Consequently the salvarsan treatment is not to be stopped, even when the serum reaction has become negative. I regard it now as necessary at the beginning of the treatment of each case to make a lumbar puncture and to repeat this even if the serum reaction has become negative. And even despite the fact that all the symptoms are diminished and that no new phenomena has presented themselves. The treatment must not follow the symptoms, but must precede them and seek to ward them off. If the fluid from the lumbar puncture shows a demonstrable lymphocytosis, and if the Wassermann reaction in the fluid is positive, the treatment should be continued."

The author then devotes some paragraphs to the discussion of the Herxheimer reaction as seen in tabes. He thinks that the frequency of the febrile reaction as seen in tabetics and paretics points to syphilis of the central system. Since the Herxheimer reaction is regarded as being produced by the liberation of an endotoxin from the bodies of spirochetes that have been killed by the drug. He states that there is frequently an increase or reappearance of the pain subsequent to an injection lasting from a few hours to a few days and to be interpreted as the effect of the action of salvarsan on the posterior roots. All pains, however, soon become less.

Therapeutic Results

As regards the therapeutic results, he continues as follows:

"The clinical histories that I recited at the Dermatological Congress in Rome, as well as the publications of other authors, demonstrate that every symptom of tabes, even those that have been regarded as evidences of degeneration, may disappear under the influences of salvarsan. On the other hand, I have not met with a single case in which all symptoms, without exception, have disappeared. * * * * *

"It is very probable that a cure in the ordinary sense of the word, that is a complete disappearance of all symptoms, will be observed only in patients who have been correctly treated at the beginning of the disease, that is in the initial period. In the others, sclerotic or cicatricial changes in some part of the central nervous system are unavoidable, and cannot be influenced. A tabetic will usually retain some remnants, some unpleasant reminders of the infection that he has suffered from. Medical gymnastics and other aids are often able to get rid of these as well. And yet in reading my reports, as well as those from other authors, who have treated tabes with insufficient doses, it is astonishing to observe the disappearance of obstinate symptoms degenerative in origin, even in inveterate tabes. A third of the cases that I have treated had suffered from the infection for ten years or more. In all cases observed between December, 1910, and March, 1912, the pains had disappeared or diminished. This diminution manifested itself in (a) diminution of their intensity. I have seen a patient from whom the painful crises extorted loud screams who has now only a light touch of pain from time to time; in another patient suffering from a hyperesthesia of the skin, so great that he couldn't bear the pressure of the bed clothes, the hyperaesthesia has disappeared. (b) In a diminution of the extent. Some of my patients suffered from pains in the forearm, in the trunk (*douleurs en corset*), in the whole lower extremity. After the treatment they complained only of slight pains in the bottom of the feet and around the knees. (c) In a diminution as regards frequency. Persistent pain lasting over several days comes now only occasionally.

"The objective disturbances of sensibility appeared to improve in the same

way in those cases in which their extent had been previously attentively attested. In one case a recent anesthesia of the cubical region of the forearm and of the hand disappeared after three injections. In another, a sensibility to temperature that had disappeared from the hands returned during the course of the treatment.

"Gastric crisis and the signs of tabetic gastralgia disappeared in all patients that exhibited these disturbances. * * * *

"The considerable diminution or disappearance of disturbances of equilibrium is not less constant than the improvement and disappearance of the pains after two or three series of injections. The power of maintaining equilibrium returned even with the eyes closed. The patients no longer walk bent over and looking at their feet as they go, they no longer totter from the direct line nor walk with their feet spread apart. One of my patients with marked ataxia after a treatment of two series of injections, could mount a stair ten feet high, thirty times a day. Lately, I have had under my observation a woman who could not go forward without leaning on her husband's arm and being guided by him. After two series of injections she is able to take walks of more than half a mile.

"A patient with intermittent disturbances, who often went along like a drunken man and couldn't go down the steps at all without holding the banisters, can, during the past six months, take long walks without fatigue and shows no longer any ataxia. I found that headaches and bulbar symptoms disappeared in all patients that suffered from such attacks, as well as daily attacks of coughing, suffocation with subsequent vomiting, laryngeal crises with loss of consciousness.

"A case of mal perforerent got well under the treatment. An improvement in the general condition is regularly to be observed and is often quite considerable. An increase in weight of from six to ten pounds was observed in several cases.

"A cure of recent symptoms in tabetics appears to be the rule and comes about much more quickly than the relief of those of long duration. Usually those cases of tabes show the most notable and immediate results which are treated in the course of a back-set at the time at which the affection is attacked in the course of obvious progress."

The author offers a table of the results

obtained in treating fifteen cases and, while the results are on the whole encouraging, they scarcely seem to bear out in full the optimistic and unhesitating conclusions which he draws from them. There have, however, appeared other reports of very favorable results from the use of salvarsan in tabes. Fordyce, in a recent number of the Journal of the A. M. A., writes:

"It relieves the pains, increases the efficiency of the bladder functions and stimulates the body nutrition. In several patients with inequality of pupils, the latter have become equal, and in two cases in which they were unresponsive to light, the reflex returned."

W. R. HOUSTON.

BOARD OF MEDICAL EXAMINERS

The following are the questions asked at the last examination held by the State Board of Medical Examiners:

Obstetrics

By C. T. Nolan, M.D.

1. Gives causes and symptoms of puerperal infection.
2. Give treatment of puerperal infection.
3. Give etiology and treatment of puerperal eclampsia.
4. Give treatment of post-partum hemorrhage.
5. State indications for terminating pregnancy prematurely.
6. State method of terminating pregnancy at the end of the second month. At the end of the sixth month.
7. Describe fetal circulation.
8. Describe pelvimetry and give the normal pelvic measurements in inches.
9. Give diameters of fetal head in inches.
10. Differentiate between normal pregnancy, tumors within the abdominal cavity and ectopic gestation.

Gynecology

By C. T. Nolan, M.D.

1. Mention varieties of uterine displacements.
2. Describe operation for retroversion of the uterus prior to menopause.
3. Give etiology and symptoms of pelvic peritonitis.
4. Give treatment of pelvic peritonitis.
5. Name the dangers of the use of the uterine sound.

6. State etiology, pathology and symptoms of carcinoma of the breast.

7. State indications for the use of the urethra.

8. Give treatment of chronic cystitis.

9. Differentiate between ovaritis, salpingitis and appendicitis.

10. What may be revealed by digital vaginal examination.

Anatomy

Dr. F. M. Ridley

1. Name articulations of occipital bone. With what bones does the clavicle articulate.

2. Name bones of Tarsus. Name divisions of vertebral column, giving distinguishing characteristics of bones of the second and third divisions.

3. What muscles are used in mastication? What muscles form quadriceps extensor femoris and where is conjoined tendon inserted? What muscles comprise pectoral group?

4. What blood vessels pass to and from liver? Name branches of external carotid artery. What is the relation of external to internal carotid?

5. What is corpus collosum? Give origin and exit of pneumogastric nerve. Give origin of great sciatic nerve. What is understood by the sympathetic nerve? Name its principal ganglia.

6. What is contained in middle mediastinum? Name subdivisions of alimentary canal. Where in topography of abdomen is sigmoid flexure? Appendix?

7. Name abdominal viscera wholly covered by peritoneum; partially covered.

8. Describe briefly uterus. Describe broad ligament and give relations.

9. Describe briefly meibomian glands. Locate Peyer's glands; Luchka's glands.

10. How is the eye supplied with blood? Name humors of the eye. What are the ciliary processes of the eye and what is average number? Describe the iris.

Surgery

Dr. F. M. Ridley

1. Give differential diagnosis between fracture and dislocation. Name cardinal principals in treatment of fractures.

2. Mention the inflammatory diseases of the bones. Describe method of reduction of dislocation of inferior maxillary. Describe Kocher's method of reducing dislocation of shoulder joint.

3. What is understood by congestion?

Inflammation? Define septicemia. Give rational treatment of abscess.

4. Give differential diagnosis between abscess and aneurism. Describe ligation of femoral artery at apex of Scarpa's triangle.

5. Describe an approved operation for appendicitis. Describe briefly an operation for gallstone in common duct.

6. Give differential diagnosis between concussion and compression of brain. Give rational treatment respectively of each.

7. Give differential diagnosis between scrotal hernia and hydrocele. Describe an approved radical cure operation for oblique inguinal hernia.

8. Give rational treatment of acute epididimitis, of hydrocele, of varicocele.

9. Name several varieties of club foot. Describe an operation for cure of talipes equino-valgus.

10. What is understood by Potts' disease?

Materia Medica and Therapeutics

J. W. Palmer, M. D.

1. Give the treatment of a case of ptomaine poisoning.

2. Differentiate empirical, rational and suggestive therapeutics.

3. Give the doses, therapeutics and physiologic action of veratrum viride and symptoms of over dose. In the treatment of what disease is it so often administered?

4. Give the treatment of purpura haemorrhagica, obstinate case of hiccup, lightning stroke, snake bite, rabid dog bite.

5. Name the antidotes and give treatment in arsenic, copper, phosphorous, bichloride of mercury, opium, strychnine, carbolic acid and cyanide potash poisoning.

6. What is a vascular contractor and dilator? Name two most important drugs in each class.

7. What is incompatibility in medicine and what are the different kinds?

8. Name fifteen official preparations of mercury.

9. Give source, uses, doses and physiologic action and therapeutics of urotropin.

10. Give the source, different preparations, doses of each and the physiologic action and therapeutics of digitalis.

Practice

J. W. Palmer, M. D.

1. What have you been taught and in your opinion is the cause of pellagra?

How would you treat it and what is your prognosis?

2. Name intestinal worms, and give prescription for each.

3. When a case of fever continues longer than two weeks, of what three diseases are you most likely to have to make differential diagnosis?

4. Name the causes of chills, four causes coma, six causes of convulsions.

5. Give the diet list for diabetes mellitus, and what class of food would you withhold?

6. What use in diagnosis is the blood pressure test?

7. What have you been taught as to the medical treatment of appendicitis?

8. Describe organic mitral regurgitant murmur; differentiate it from anemic murmur and state what treatment you would give in each case. Define angina pectoris. Give cause and treatment.

9. How is malarial fever contracted and how can it be prevented? Name the different forms. Give the varieties of each organism found in each form, and treatment of each form.

10. Name nine diseases which would cause cough; seven that would cause hematuria; seven that would cause dyspnea; and seven that would cause jaundice.

Chemistry

Nichols Peterson, M.D.

1. What physical actions have a tendency to decompose compound substances?

2. Explain the terms reaction and reagent.

3. How is chloroform tested for impurities?

4. Mention the properties of morphine and its salts; give tests for them.

5. State the physical and chemical properties of quinine and cinchonine. Which of their salts are official, and by what tests may these alkaloids be recognized?

6. Give tests for strychnine, atropine and veratrine.

7. Give the properties and tests for cocaine.

8. What points are to be considered and what substances determined in the analysis of normal and abnormal urine?

9. Give the chemical composition of the body.

10. Describe in detail the principal tests for arsenic.

Physiology

Nichols Peterson, M.D.

1. Give three proofs that the skin and other organs are related.
2. Describe the influence of nerve system on production of sweat.
3. What is the function of the eustachian tube?
4. Describe the response of the heart to the action of a stimulus.
5. Describe the sensor area of the human brain.
6. Give histology and function of the kidneys.
7. Name and describe the reproductory organs of the female.
8. Give the nutrition of the embryo.
9. Give the mechanism of phonation.
10. Define pulse, artery, capillary, pericardium, lymphatic, portal, pulmonary and systemic circulation, aorta, auricle, ventricle, diastole, systole, aneurism, palpitation, heart failure.

Pathology

F. D. Patterson, M.D.

1. Define septicaemia.
2. Define pyemia.
3. What is bacteriaemia?
4. Distinguish bacteriaemia from bacterio-toxaemia.
5. Define an inflammation.
6. Give some of the causes of its several stages.
7. Define suppuration.
8. Name the three varieties of pus.
9. Name several pyogenic agents.
10. Name two bacteria that are accidentally pyogenic.

Diseases of Children

F. D. Patterson, M.D.

1. Under what conditions is gavage indicated, and how would you administer it?
2. Under what conditions would you advise weaning?
3. What would be your chief guide in the selection of a wet nurse?
4. Etiology, symptoms and treatment of chronic ileo-colitis.
5. Cause, symptoms and treatment of acute gastro-enteritis.
6. Describe method of irrigating the colon.
7. Define measles, and what are the most usual complications and sequelae.
8. Differential diagnosis of varicella and variola?

9. Management of case of acute articular rheumatism in a child.

10. What is the most usual complication and dangerous sequelae in acute articular rheumatism, and how would you prevent it?

SOCIETY NOTES**SEVENTH DISTRICT MEDICAL SOCIETY**

The following program of the Seventh District Medical Society of Georgia was rendered at the tenth semi-annual session, which was held at Rome, October 9, 1912, commencing at 10.30 a. m.:

Prayer—Dr. Snyder.

Address of Welcome in behalf of the City—Hon. Barry Wright.

Address of Welcome from Floyd County Medical Society—Dr. George B. Smith.

Response to Welcome addresses.

Reports of committees.

Papers

1. "The Value of the X-ray in the Diagnosis of Foreign Bodies"—Dr. A. B. Elkin, Atlanta.

2. "Tuberculosis and the Cotton Mill"—Dr. J. H. Hammond, LaFayette.

3. "The Dietetic Treatment of Diabetes Mellitus"—Dr. J. E. Paullin, Atlanta.

4. "A Consideration of the Subject of Goiter, with Especial Reference to Surgical Treatment"—Dr. E. G. Jones, Atlanta.

5. "Naked Eye Pathology of the Urine"—Dr. A. L. Fowler, Atlanta.

6. "Possible Etiology of Pellagra"—Dr. T. L. Driscoll, Cartersville.

7. "Alcohol as a Stimulant"—Dr. F. V. Turk, Stilesboro.

8. "La Grippe"—Dr. A. C. Shamblin.

9. "Suppuration of Maxillary Antrum"—Dr. Cox.

10. Papers by Dr. Geo. B. Smith, Dr. W. W. Mangum, and Dr. Willis.

11. Other subjects that were announced.

EIGHTH DISTRICT MEDICAL SOCIETY

The meeting of the Eighth District Medical Society was held in Covington, September 25, 1912, and was called to order by the president, Dr. T. J. Wills, of Washington.

Prayer was offered by the Rev. J. A. Fagan, of Covington. A beautiful address of welcome by Mayor Smith, of Covington,

responded to by Dr. J. A. Robbins, of Siloam, in quite an appropriate and appreciated address.

Address by the president, Dr. T. J. Wills, of Washington. Also President Wills favored us with a paper on "Pellagra".

Address by Dr. W. B. Hardman, of Commerce, chairman of the Board of Councilors, on "Organization". Dr. Hardman also gave us a very instructive talk on "Colles Fracture; Its Treatment and Results". It was very much appreciated and discussed by Dr. I. H. Goss, Dr. W. D. Travis, of Covington; Dr. S. S. Smith, of Athens. The discussion was closed by Dr. W. B. Hardman.

Paper read by Dr. W. D. Travis, of Covington, on "Prevention of Disease". Dr. Travis' paper was discussed by Dr. W. B. Hardman, of Commerce; Dr. I. H. Goss, of Athens; Dr. R. C. Wilson, of Athens. Discussion was closed by Dr. Travis.

The minutes were read and approved, with one exception, which, on motion of Dr. Travis, was struck from the minutes.

Paper by Dr. R. C. Wilson, professor of pharmacy at the University of Georgia, on "The Relation of Physician and Pharmacist". Discussed by Dr. I. H. Goss.

Dr. I. H. Goss, of Athens, read a very instructive paper on "The Use of Iodine in Surgery". Discussed by Dr. Hardman, of Commerce; Dr. Travis, of Covington; and Dr. Wilson, of Athens. Discussion closed by Dr. I. H. Goss.

A very pretty address given by Dr. W. W. Pilcher, of Warrenton, president of the Medical Association of Georgia, was very much enjoyed.

A paper was read by Dr. N. G. Slaughter on "The Necessity of the Healthy Month in the Prevention and Treatment of Disease".

Next came the election of officers, Dr. W. D. Travis, of Covington, being unanimously elected president; Dr. C. C. King, of White Plains, unanimously elected vice-president; Dr. E. M. Coleman, unanimously elected secretary-treasurer.

A cordial invitation from Elberton, to hold the next meeting in that city, was read as follows:

Elberton, Ga., Sept. 24, 1912.

Dr. T. J. Wills,

Pres. Eighth District Medical Society.

Dear Doctor—On behalf of the Elberton County Medical Society, I hereby ex-

tend to you and the Medical Society of the Eighth District of Georgia a cordial invitation to meet with us in Elberton, Georgia, on the set date for the next annual meeting.

(Signed)

C. E. EARLE, M.D., President.

L. P. EBERHART, Secretary.

Elberton, Ga., Sept. 24, 1912.

To the Members of the Eighth District Medical Society:

The City of Elberton hereby extends to your body a very cordial invitation to meet in Elberton when you next convene.

(Signed) J. M. WESTER, Mayor.

A resolution was passed as follows:

Resolved, That the thanks of the Association be extended to the Newton County Medical Society, the Covington News, and the citizens of Covington for the hospitality, kindness and entertainment during the meeting of the Eighth District Medical Society.

At 1 o'clock the society took a recess, when we went to a delightful and very enjoyable barbecue about four and one-half miles out from the city, going in automobiles to and from.

In the afternoon, after adjournment, a delightful ride over to Oxford to see Emory College was taken.

MORGAN COUNTY MEDICAL SOCIETY

On October 8, 1912, Morgan County Medical Society was reorganized, and the following officers were elected:

President—Dr. J. H. Trout.

Vice-President—Dr. J. L. Porter.

Secretary-Treasurer—Dr. D. D. Trotter.

Board of Censors—Dr. A. R. Thompson, Dr. H. T. Harris, Dr. W. M. Fambrough.

Delegate to State Medical Association—Dr. W. E. Adams.

Alternate—Dr. R. W. Trotter.

NEW MEMBERS SINCE LAST ISSUE

Dr. T. E. Reville.....Folkston, Ga.

Dr. T. Byron King.....Sandersville, Ga.

Dr. C. N. Sisk.....Bogart, Ga.

Dr. W. M. Fambrough.....Bostwick, Ga.

Dr. A. R. Thompson.....Buckhead, Ga.

Dr. G. M. Dunn.....Rutledge, Ga.

Dr. J. L. Porter.....Rutledge, Ga.

Dr. R. W. Trotter.....Madison, Ga.

Dr. H. T. Harris.....Madison, Ga.

Dr. J. H. Trout.....Pennington, Ga.

Dr. C. T. Riden.....Bostwick, Ga.

Dr. Geo. P. Florence.....Godfrey, Ga.

RATES FOR REPRINTS

100.....	\$1.00 per page
200.....	1.25 per page
500.....	1.50 per page
1000.....	2.00 per page

Covers to count as four pages when ordered.

The Journal is owned and published by the Association, and all profit goes to make it better. Each member of the Association is financially interested in the Journal to the same extent as every other member, and each member is rightfully anxious for the financial success of the publication.

The greater this financial success, the greater the practical value can be made to the individual member, and hence the greater the value as an advertising medium.

Our advertisers, by their patronage, help to support the Journal, and make its successful publication possible. In return they expect, and rightfully, a fair return for their money. Every dollar spent by a member of the Medical Association of Georgia with advertisers in our Journal, in preference to non-advertisers, is a dollar spent in advancing his own personal advantage, for he has contributed something indirectly to the betterment of his own property.

The Journal cannot exist without the advertisers and their good will.

The advertisers cannot continue in business without the patronage of the medical profession.

The medical man cannot continue in business without the supplies for sale by the Advertisers.

The interests of all are identical—the profession must depend upon the manufacturers, etc. The manufacturers, drug houses, etc, must depend upon the more progressive and more successful physicians. The interests of both are best served through the official Medical Journal—the Journal published by the profession in its own best interests, scientifically and ethically.

ADVERTISING RATES

1	Page	1 year.....	\$150.00
$\frac{1}{2}$	"	1 ".....	87.50
$\frac{1}{3}$	"	1 ".....	50.00
$\frac{1}{4}$	"	1 ".....	33.00
$\frac{1}{8}$	"	1 ".....	25.00
$\frac{1}{16}$	"	1 ".....	25.00
1	Page	6 months.....	87.50
$\frac{1}{2}$	"	6 ".....	50.00
$\frac{1}{3}$	"	6 ".....	33.00
$\frac{1}{4}$	"	6 ".....	25.00
$\frac{1}{8}$	"	6 ".....	20.00
$\frac{1}{16}$	"	6 ".....	20.00
1	Page	3 Mouths.....	50.00
$\frac{1}{2}$	"	3 ".....	33.00
$\frac{1}{3}$	"	3 ".....	15.00
$\frac{1}{4}$	"	3 ".....	10.00
$\frac{1}{8}$	"	3 ".....	10.00
1	Page	1 month.....	25.00
$\frac{1}{2}$	"	1 ".....	15.00
$\frac{1}{3}$	"	1 ".....	10.00
$\frac{1}{4}$	"	1 ".....	7.50
$\frac{1}{8}$	"	1 ".....	7.50

These rates do not apply to cover pages, space next to reading matter, or matter requiring to be reset.

Reduction in the Prices of Bacterial Vaccines

The attention of the medical profession is hereby directed to a sweeping reduction in the prices of our Bacterial Vaccines (Bacterins). (See paragraph 2 in the panel below.) No physician need now hesitate to use these high-class, scientific products on the score of price.

TWO BOOKLETS

that should be in the hands of every practitioner of medicine.

1. "Bacterial Vaccines and Tuberculins": A concise review of the essential facts relating to bacterial-vaccine therapy. It contains forty-eight pages of text matter and thirteen full-page engravings in colors. It is a handsome piece of literature and embodies much valuable information.

2. "Physicians' Reference List of Biological Products." This covers Serums, Bacterins and Tuberculins, giving prices (including the new quotations on Bacterial Vaccines), together with a lot of useful therapeutic information in ready-reference form.

ASK FOR THESE PAMPHLETS.
WE SEND THEM FREE, POSTPAID.

PARKE, DAVIS & COMPANY

LABORATORIES: Detroit, Mich., U.S.A.; Walkerville, Ont.; Hounslow, Eng.

BRANCHES: New York, Chicago, St. Louis, Boston, Baltimore, New Orleans, Kansas City, Minneapolis, Seattle, U.S.A.; London, Eng.; Montreal, Que.; Sydney, N.S.W.; St. Petersburg, Russia; Bombay, India; Tokio, Japan; Buenos Aires, Argentina.

The Journal of the Medical Association of Georgia



PUBLISHED MONTHLY UNDER DIRECTION OF THE COUNCIL

Editorial and Business Office—300, 302 and 304 Harison Building. Subscription Price, \$1.00

Entered as second-class matter, August 4, 1911, at the Post Office at Augusta, Ga., under the Act of March 3, 1879.

Vol. II AUGUSTA, GA., DECEMBER, 1912 No. 8

CONTENTS AND DIGEST

ORIGINAL ARTICLES

Intestinal Obstruction. By G. W. Whiteside, M.D., Lovonia	243
The Necessity of Healthy Mouths in the Treatment and Prevention of Diseases. By N. G. Slaughter, M.D., Athens..	247
Malaria. By J. C. Holliday, M.D., Athens.....	248
Some Observations of Pellagra. By T. J. Wills, M.D., Washington	251
Ethical Relations Between Physicians and Pharmacists. By R. C. Wilson, Ph.G., Athens.....	255
On the Treatment of Pneumonia. By B. W. Lockhart, M.D.	259
The Value of the X-ray in the Diagnosis of Foreign Bodies. By A. B. Elkin, M.D., Atlanta.....	260
Naked-Eye Pathology of the Urine. By A. L. Fowler, M.D., Atlanta.....	262
My Observations and Personal Experience on the Improved Technique of Ether Vapor and the Nitrous-Oxide-Oxygen Anesthetics. By T. J. Collier, M.D., Atlanta.....	266
Discussion on Dr. Collier's Paper.....	268

EDITORIALS

Hold Your Annual Meeting This Month.....	271
Medical Importance of Panama.....	272
The Earliest Known Pair of Spectacles.....	272
Conference of State Secretaries.....	273

SOCIETY NOTES

Eleventh District Medical Society.....	270
--	-----

TUBERCULOSIS

Georgia Should Safeguard Her Public Schools from Tuberculosis, by Requiring a Medical Inspection of Her School Children	276
"Does God Fix the Death Rate?"	277

SURGERY

Treatment of Wounds without Dressings.....	278
A New Method for Reducing Shoulder Dislocations.....	278
Epithelioma of the Lower Lip.....	278
Sterilization of Small Instruments.....	279

BOOK REVIEWS

Principles of Hygiene.....	279
Muscle Spasm and Degeneration in Intrathoracic Inflammation	279

OFFICERS

President.....W. W. PILCHER, M.D., Warrenton
First Vice-Pres.....J. W. PALMER, M.D., Ailey
Second Vice-Pres.....T. H. HALL, M.D., Macon
Sec.-Treas.....W. C. LYLE, M.D., Augusta

COUNCILORS

First Dist.—J. Lawton Hiers, M.D.....Savannah
Second Dist.—Gordon Chason, M.D.....Bainbridge
Third Dist.—V. O. Harvard, M.D.....Arabi
Fourth Dist.—C. L. Williams, M.D.....Columbus
Fifth Dist.—J. N. Ellis, M.D.....Atlanta
Sixth Dist.—J. A. Combs, M.D.....Locust Grove
Seventh Dist.—W. P. Harbin, M.D.....Rome
Eighth Dist.—I. H. Goss, M.D.....Athens
Ninth Dist.—W. B. Hardman, M.D.....Commerce
Tenth Dist.—W. J. Cranston, M.D.....Milledgeville
Eleventh Dist.—A. G. Little, M.D.....Valdosta
Twelfth Dist.—E. T. Coleman, M.D.....Graymont

VICE-COUNCILORS

First Dist.—A. J. Mooney, M.D.....Statesboro
Second Dist.—C. K. Sharpe, M.D.....Arlington
Third Dist.—A. G. Crittenden, M.D.....Shellman
Fourth Dist.—T. S. Bailey, M.D.....Newnan
Fifth Dist.—F. K. Boland, M.D.....Atlanta
Sixth Dist.—R. H. Stovall, M.D.....Macon
Seventh Dist.—J. H. Hammond, M.D.....LaFayette
Eighth Dist.—E. G. Adams, M.D.....Greensboro
Ninth Dist.—J. S. Tankersley, M.D.....Ellijay
Tenth Dist.—G. L. Carpenter, M.D.....Wrens
Eleventh Dist.—J. G. Tuten, M.D.....Jesup
Twelfth Dist.—M. L. Currie, M.D.....Vidalia

STANDING COMMITTEES

Scientific Work

E. E. Murphey, M.D., Chairman.....Augusta
V. H. Bassett, M.D.....Savannah
W. C. Lyle, M.D., ex-officio.....Augusta

Medical Defense

M. A. Clark, M.D., Chairman.....Macon
J. N. Ellis, M.D.....Atlanta
E. T. Coleman, M.D.....Graymont
J. G. Dean, M.D.....Dawson
E. G. Jones, M.D.....Atlanta

Organization

T. J. McArthur, M.D., Chairman.....Cordele
G. R. White, M.D.....Savannah
W. B. Hardman, M.D.....Commerce

Public Policy and Legislation

J. R. Littleton, M.D., Chairman.....Augusta
W. L. Champion, M.D.....Atlanta
C. C. Harrold, M.D.....Macon
President and Secretary, ex-officio

Necrology

V. D. Lockhart, M.D., Chairman.....Maysville
W. B. Emery, M.D.....Atlanta
S. S. Smith, M.D.....Athens
M. F. Carson, M.D.....Griffin
J. M. Hull, M.D.....Augusta

Arrangements

(Committee to be selected by the Chatham
County Society)

Delegates to American Medical Association

W. H. Doughty, M.D.....Augusta
E. G. Ballenger, M.D. (alternate).....Atlanta
T. J. Charlton, M.D.....Savannah
T. R. Wright, M.D. (alternate).....Augusta

COLLABORATORS

History of Medicine

J. B. Baird, Sr., M.D.....Atlanta
L. G. Hardman, M.D.....Commerce
T. R. Wright, M.D.....Augusta

Medicine

W. W. Jarrell, M.D.....Thomasville
Ralston Lattimore, M.D.....Savannah
Thos. D. Coleman, M.D.....Augusta

Tuberculosis

C. H. Richardson, M.D.....Montezuma
J. H. Hammond, M.D.....LaFayette
T. E. Oertel, M.D.....Augusta

Pellagra

G. M. Niles, M.D.....Atlanta
E. M. Green, M.D.....Milledgeville
N. M. Moore, M.D.....Augusta

Nervous and Mental Diseases

L. M. Gaines, M.D.....Atlanta
E. T. Gibbes, M.D.....Gainesville
W. R. Houston, M.D.....Augusta

Pediatrics

W. Z. Holliday, M.D.....Atlanta
M. A. Clark, M.D.....Macon
W. A. Mulherin, M.D.....Augusta

Public Health

E. C. Benedict, M.D.....Athens
H. F. Harris, M.D.....Atlanta
E. E. Murphey, M.D.....Augusta

Surgery

W. F. Westmoreland, M.D.....Atlanta
R. P. Glenn, M.D.....Columbus
C. W. Crane, M.D.....Augusta

Orthopedics

H. J. Williams, M.D.....Macon
Michael Hoke, M.D.....Atlanta
H. M. Michel, M.D.....Augusta

Genito-Urinary and Syphilis

J. L. Farmer, M.D.....Savannah
W. L. Champion, M.D.....Atlanta
H. W. Shaw, M.D.....Augusta

Obstetrics

H. McHatton, M.D.....Macon
R. L. Miller, M.D.....Waynesboro
A. J. Kilpatrick, M.D.....Augusta

Gynecology

E. G. Jones, M.D.....Atlanta
J. R. B. Branch, M.D.....Macon
W. W. Battey, Jr., M.D.....Augusta

Eye, Ear, Nose and Throat

F. P. Calhoun, M.D.....Atlanta
H. H. Martin, M.D.....Savannah
W. C. Lyle, M.D.....Augusta

Roentgenology

E. R. Corson, M.D.....Savannah
J. S. Derr, M.D.....Atlanta
John C. Wright, M.D.....Augusta

Anaesthesias

T. J. Collier, M.D.....Atlanta
Chas. Usher, M.D.....Savannah
M. S. Levy, M.D.....Augusta

Laboratories

K. R. Collins, M.D.....Atlanta
V. H. Bassett, M.D.....Savannah
Everard Wilcox, M.D.....Augusta

DISTRICT SOCIETIES

DISTRICT	PRESIDENT	SECRETARY
First	E. T. Coleman.....Graymont	Chas. Usher.....Savannah
Second	Hugo Robinson.....Alhany	F. M. Martin.....Shellman
Third	C. A. Greer.....Oglethorpe	M. R. Smith.....Cordele
Fourth	H. J. Goodwin.....Roooville	Homer Boatright.....Carrollton
Fifth	W. D. Travis.....Covington	W. S. Ansley.....Decatur
Sixth	W. J. Little.....Macon	I. H. Adams.....Macon
Seventh	A. B. Greene.....Cartersville	T. Lowry.....Euharlee
Eighth	W. D. Travis.....Covington	E. M. Coleman.....
Ninth	V. D. Lockhart.....Maysville	A. D. White.....Gainesville
Tenth	J. R. Beall.....Blythe	G. A. Traylor.....Augusta
Eleventh	H. C. Wheelchel.....Douglas	T. J. Carswell.....Waycross
Twelfth	J. L. Weddington.....Dublin	C. R. Riner.....Summit

COUNTY SOCIETIES

COUNTY	PRESIDENT	SECRETARY
Baldwin	J. W. Mobley.....Milledgeville	W. F. Tanner.....Milledgeville
Banks	V. D. Lockhart.....Maysville	J. D. Rice.....Homer
Bartow	A. T. Calhoun.....Cartersville	H. E. Felton.....Cartersville
Ben Hill	E. J. Dorminy.....Fitzgerald	L. S. Osborne.....Fitzgerald
Bibb	F. M. Cunningham.....Macon	W. D. Hereford.....Macon
Blue Ridge	J. S. Tankersley.....Ellijay	C. B. Crawford.....Blue Ridge
Brooks	S. S. Galuden.....Quitman	J. S. King.....Quitman
Bulloek	D. E. McEachern.....Statesboro	F. F. Floyd.....Statesboro
Burke	C. H. Cox.....Waynesboro	J. M. Byne.....Waynesboro
Butts	B. F. Aiken.....Jenkins	W. H. Steele.....Jackson
Carroll	M. M. Hallum.....Carrollton	R. E. Foster.....Carrollton
Chatham	V. H. Bassett.....Savannah	A. J. Waring.....Savannah
Clarke	A. C. Holliday.....Athens	M. F. Matthews.....Athens
Cobb	W. M. Kemp.....Marietta	W. H. Perkinson.....Marietta
Coffee	C. W. Roberts.....Douglas	Quitman Holton.....Douglas
Colquitt	J. H. Green.....Hartsfield	J. E. Lanier.....Moultrie
Coweta	T. B. Davis.....Newnan	T. S. Bailey.....Newnan
Crisp	A. J. Wheelchel.....Cordele	T. E. Bradley.....Cordele
Decatur	N. L. Spengler.....Donalsonville	Gordon Chason.....Bainbridge
DeKalh	A. R. Watkins.....Chamblee	W. S. Ansley.....Decatur
Dougherty	C. W. Walker.....Albany	Hugo Robinson.....Alhany
Elbert	C. E. Earle.....Elberton	L. P. Eberhart.....Elberton
Emanuel	C. R. Riner.....Summit	R. C. Franklin.....Graymont
Floyd	W. W. Mangum.....Rome	W. L. Funkhouser.....Rome
Forsyth	J. H. Hockenhull.....Cumming	J. H. Hockenhull.....Cumming
Franklin	F. G. Moss.....Royston	B. T. Smith.....Carnesville
Fulton	L. B. Clarke.....Atlanta	R. R. Daly.....Atlanta
Gordon	W. B. Floyd.....Plainville	E. O. Shellhorse.....Calhoun
Greene	C. O. Copelan.....White Plains	E. G. Adams.....Greensboro
Hahersham	W. V. Chandler.....Baldwin	R. B. Lamb.....Demorest
Hall	A. D. White.....Gainesville	E. T. Gihhs.....Gainesville
Hancock	R. C. Wiley.....Sparta	J. A. Brown.....Sparta
Jackson	L. Landers.....Commerce	J. C. Bennett.....Jefferson
Jasper	F. S. Belcher.....Monticello	C. L. Ridley.....Hillsboro
Jefferson	J. W. Pilcher.....Stellaville	G. L. Carpenter.....Wrens
Jenkins	L. J. Belt.....Milen	W. E. Rushing.....Millen
Laurens	J. J. Baston.....Duhlin	W. C. Thompson.....Duhlin
Lowndes	A. Griffin.....Valdosta	J. M. Smith.....Valdosta
Macon	C. H. Richardson.....Montezuma	C. A. Greer.....Oglethorpe
Madison	L. E. Roper.....Comer	J. L. Baker.....Carlton
Meriwether	E. B. Terrell.....Greenville	P. W. Fitts.....Greenville
Monroe	J. F. Lancaster.....Forsyth	J. O. Elrod.....Forsyth
Muscogee	J. M. Croke.....Columbus	G. S. Murray.....Columbus
McDuffie	Sterling Gihson.....Thomson	B. F. Riley.....Thomson
Newton	S. W. Everett.....Almon	O. L. Holmes.....Covington
Oconee	J. T. Elder.....Farmington	W. M. White.....Watkinsville
Ocmulgee	J. D. Herrman.....Eastman	J. C. Wall.....Eastman
Pike	R. A. Mallory.....Concord	M. M. Head.....Zehulon
Polk	C. V. Wood.....Cedartown	H. M. Hall.....Cedartown
Putnam	V. H. Taliaferro.....Eatonton	S. A. Clark.....Eatonton
Randolph	E. C. McCurdy.....Shellman	F. G. Barfield.....Cuthbert
Richmond	T. D. Coleman.....Augusta	W. C. Kellogg.....Augusta
Spalding	E. R. Anthony.....Griffin	J. M. Thomas.....Griffin
Stephens	Jeff Davis.....Toccoa	C. L. Ayers.....Toccoa
Stewart	R. L. Grier.....Lumpkin	M. Walton.....Lumpkin
Taliaferro	J. A. Rhodes.....Crawfordville	L. R. Brown.....Sharon
Terrell	J. T. Arnold.....Parrot	C. T. Kenyon.....Dawson
Thomas	W. W. Jarrell.....Thomasville	Harry Ainsworth.....Thomasville
Tift	W. H. Hendricks.....Tifton	L. A. Baker.....Tifton
Toomhs	J. M. Meadows.....Vidalia	T. C. Thompson.....Vidalia
Tri	F. L. Carroll.....Bahcock	C. K. Sharp.....Arlington
Troup	H. M. Ridley, Jr.....LaGrange	John Banks.....LaGrange
Walker	J. M. Underwood.....Lafayette	J. H. Hammond.....Lafayette
Ware	J. C. Rippard.....Waycross	T. J. Carswell.....Waycross
Warren	G. R. Maner.....Warrenton	R. D. Nash.....Norwood
Wayne	J. G. Tuten.....Jesup	E. C. Crumney.....Jesup
Wilkes	A. W. Simpson.....Washington	O. S. Wood.....Washington
Worth	W. C. Tipton.....Sylvester	J. L. Tracy.....Sylvester

Journal of the Medical Association of Georgia

W. C. LYLE, M.D., Editor - Augusta, Georgia

INTESTINAL OBSTRUCTION*

G. W. Whiteside, M.D., Lovonia

I think this is a subject of paramount importance to both the physician and surgeon, upon which neither can afford to err, either in diagnosis or treatment, because mistakes in either mean death to the patient. The further fact that the disease is, in the great majority of instances, amenable to successful treatment, places it in the list of those that should be familiar to all practitioners of the healing art.

By intestinal obstruction we mean that condition of the bowel by which its contents are prevented from onward passage because of a closure of the lumen of the gut.

The causes producing this condition of occlusion of the lumen of the bowel and obstruction of the onward flow of its contents are either (1st) within the gut, or (2d) external to it.

The most usual causes operating within the intestines are:

(1) Inspissated fecal matter, or fecal impaction. The collection of hardened fecal matter collects in the large intestine and seldom causes a complete blocking of that viscus.

(2) Fecal Stones. Of these there are several varieties:

(a) Coproliths, which develop in the large intestine from inspissated fecal matter. They may attain a large size and great firmness and completely occlude the lumen of the bowel. It is rare, however, that complete obstruction is produced by these masses, since there is usually sufficient space between them and the wall of the gut to permit of the passage of liquid feces and of gas.

(b) Enteroliths. These are smaller stones that arise in the intestines. They vary much in weight and consistency, de-

pending upon the material entering into their formation. The harder ones are made up of phosphates of calcium or magnesium, deposited about some foreign body which serves as a nucleus. The lighter and softer enteroliths are made up of vegetable indigestible material and having incorporated with it salts of lime, magnesium or sodium.

(3) Gall Stones. These gain an entrance to the intestine usually by a fistulous opening between the gall-bladder and the duodenum, though cases have not been wanting in which the stone has ulcerated its way into the duodenum from the common bile-duct. The stone having reached the intestine, may cause obstruction at any point between that of entrance and the ileocecal valve. It is, however, much more common to have the lumen of the gut closed where it is smallest and where the intestinal mesentery is shortest, viz., in the lower part of the ilium.

(4) Absolute Obstruction by Parasites. Authorities are not agreed as to whether complete obstruction ever arises from this cause. The writer has no personal knowledge of an authentic case of absolute obstruction due to this cause.

(5) Tumors. Neoplasms growing within the intestinal canal may fill it and prevent the passage of both gas and feces.

Of the causes acting on the outside of the intestine to narrow its calibre, and cause complete obstruction, we may preferably consider:

(1) Volvulus. By this we mean a twisting of coils of intestines upon each other, or a torsion of a single coil upon itself, so that the lumen of the intestine is closed. The closure is not necessarily always complete. It occurs most commonly at the sigmoid flexure of the colon; rarely at the ileo-cecal junction or other parts of the large intestine. It occurs, though not frequently, in the small intestines. The actual twist is, as a rule, about the mesentery as an axis; but it is quite possible and cases

* Read at meeting of Eighth District Medical Society, Covington, Ga., September 25, 1912.

are reported in proof of it, for the gut to twist upon itself. Coils of small intestines may become knotted together, or the ilium may become tied up with the sigmoid flexure of the colon. The twisting may vary in degree. When the volvulus is not complete, spontaneous recovery may take place; but when the torsion is complete the changes that speedily follow in the parts involved make untwisting impossible.

The etiological factors entering into the cause of volvulus are numerous. Fecal impaction stands first upon the list. The waste material fills the fecal reservoir, the upper part of the filled portion causes it to prolapse upon the lower part, thus bringing the two ends near together, when peristaltic movements twist them upon each other. Of other causes for volvulus, the most active are undue intestinal peristalsis; a long mesentery; contracting exudate in the mesentery; tumors and bulky, undigestible food stuffs. The changes that follow a complete closure of a portion of the intestines by a twisting about the mesenteric axis is congestion due to interference with the venous return, oedematous thickening of all of the bowel coats, decomposition of the intestinal contents with formation of gas, and then necrosis of the strangulated part.

At first there is violent peristalsis without much abdominal distention, but this is soon followed by paralysis of the intestinal wall and gaseous distension of the abdomen and a collection into the peritoneal cavity of a quantity of bloody fluid.

(2) Intussusception or Invagination. This term is used to express a condition in which one part or portion of intestine is rolled into the lumen of the adjacent portion—that is, the one part is swallowed by the other. The intussusception, or entering part, forms two layers, the entering and returning layers; while the intussusciptens, or receiving part, forms a third layer. So that in every case of complete invagination there are in the mass or tumor, at least three distinct intestinal layers, and also the mesentery of the invaginated part. There may, however, be more than three coats. In what is known as the double form, five coats may enter into the mass and in the triple form, seven

are found. Partial invagination arises when a part of the intestinal wall is dragged into the adjoining portion of the gut. This is usually due to the existence of a tumor attached by a pedicle to the wall, and hanging within the intestinal lumen.

Intussusception may occur in any portion of the intestines, small or large, but it is more frequent in some parts than in others.

Invagination of the small into the large intestine forms more than fifty per cent. of all cases for all ages, though in childhood the percentage is much higher. About thirty per cent. of cases in childhood occur in the ilium and twenty per cent. in the colon; while these two situations furnish about an equal number in adult life.

The disease may almost be said to be one of childhood, since at least half of all cases occur during the first few years of life.

The actual cause producing intussusception of the bowel is as yet not positively determined, though certain etiological factors have been recognized and tabulated.

Some of these are: Age, fifty per cent. occurring in youth; sex, the majority of cases occur in females; foreign growth in the intestine; abdominal injuries; pregnancy; diarrhoea, and other intestinal disorders.

Three theories of the actual cause of this trouble may be mentioned; all have ardent and enthusiastic advocates.

First—The Spastic Theory. According to this theory it is contended that a portion of the intestine undergoes tetanic contraction, and then the adjacent relaxed portion is drawn over it.

Second—The Paralytic Theory. This is just the reverse of the spastic contention. According to it there is no undue contraction, but a portion of intestine relaxes, because of the paralysis due to diarrhoea, traumatism, etc., and the adjacent normally-contracting portion slips into it.

Third—Disproportion in the width of the ilium and the cecum. This is stated to be responsible for many, if not all of the cases of ileo-cecal invaginations.

Pathological Changes Following Intussusception

A well-defined line between the agonal

and the vital forms of intussusception should be drawn. The former is physiological and occurs just before death; the latter is pathological and has no causative relationship in time with dissolution. The physiological variety occurs in the small intestine, is usually multiple, and the invagination may be either from below, upwards, or from above, downwards, and does not drag the mesentery in with it.

The pathological variety differs in being usually single, occurs at any age. The invagination is descending in ninety per cent. of the cases, and the mesentery accompanies the invaginated part.

The pathological variety is the only one that concerns us as practitioners, but from a medico-legal standpoint we must not forget the characteristics of the other.

In pathological intussusception the invagination in nearly all cases is from above downwards; the venous return is interfered with in the invaginated portion; congestion, edema, inflammatory exudate and necrosis, soon supervene.

At first there may be some relief to the congestion from the rupture of the blood vessels in the mucous membrane of the congested portion, but as the swelling increases the relief ceases and the intussusceptum dies. A local peritonitis unites the peritoneum at the neck of the invaginated portion, and if the patient lives long enough for the intussusceptum to slough away, the general peritoneal cavity will be thereby protected, and the patient may recover.

Obstruction by Bands and Hernial Constrictions

(a) Bands result from peritoneal adhesions caused by peritonitis. They may be formed in any part of the abdominal cavity, but occur most frequently at the ileo-cecal junction, in the region of the gall-bladder and at the sigmoid flexure of the colon.

The small intestines is the part usually involved and the infection which causes the inflammatory band may arise from the appendix vermiformis, the female pelvic organs, the gall-bladder, or a Meckel's diverticulum. The bands may not only surround the intestines, but they may form

clefts, or openings, into which a coil of intestine may find its way and become obstructed.

(b) Clefts, or openings, in the mesentery or the omentum, through which a loop of intestine may find its way and have the lumen obstructed, may exist congenitally or be the result of careless handling at a time of operation.

(c) Hernias, both internal and external, are causes for bowel obstruction. When it is produced by an external hernia, it is not, as a rule, difficult to diagnose; but when an internal hernia is responsible for the closure of the bowel lumen its recognition may be, and oftentimes is, impossible.

(d) Obstruction of the bowel sometimes results from the pedicle of an ovarian tumor becoming twisted about a coil of intestine. Recently, the author operated upon a case of obstruction in which the tumor pedicle was wrapped about the sigmoid flexure of the colon, causing complete strangulation of that portion of the intestine.

The symptoms of acute obstruction are: Pain, nausea, vomiting, constipation, meteorism, ascites, shock and collapse.

Pain.—In a typical case the pain is sudden in onset; is colicky in character, and is referred to the umbilicus. As a rule it is violent and persists—wave after wave in increasing intensity being dashed against the obstruction in an effort on the part of nature to overcome it. After a time, and especially if the intestine be somewhat emptied by vomiting, the pain may cease, only to again return in a short time, after the intestine has either regained its tone or been filled with feculent material. Tenderness over the abdomen is not present until a peritonitis or an inflammation of the intestine has occurred. A mild degree of pressure tenderness may arise late in the disease and be due to the frequent and violent contractions of the intestinal muscle fibers.

Vomiting.—This occurs sooner or later in all cases. At first the vomiting may be reflex, but later it is due to the intestinal contents being forced into the stomach by the violence of the peristaltic waves. The contraction of the intestinal coats narrows

the lumen of the gut; the bowel contents being unable to pass the obstruction, must find an outlet somewhere, and, as a consequence, they are forced back into the stomach from which they are vomited. The vomited matter is, at first, the stomach contents; this is followed by bile stained mucous and later, the ejected matter is a brownish fluid, with a fetid or fecal odor.

This is the so-called stercoraceous vomiting. The vomiting of scybalous masses has been reported. It is difficult to understand how this could occur through a normally formed intestinal tract. The vomiting occurs earlier and is more persistent when the obstruction is in the small bowel.

When the obstruction is in the colon, and especially if it is situated in the sigmoid or rectum, the vomiting may be delayed and will not be persistent. After the first emptying of the stomach, the vomiting may cease for a time, only, however, to recur.

Constipation.—Neither feces or gas pass from the bowels in complete obstruction. An enema may wash from the intestine below the point of obstruction, some fecal masses, but no flatus will escape with the ejected fluid and fecal matter.

Meteorism is always present, to some degree, in obstruction of the bowel. It is progressively increased as the obstruction nears the lower part of the intestinal canal, being but slight when the disease is situated high up in the small intestine, and greatest when the sigmoid is the seat of obstruction.

This symptom is by no means diagnostic, and should not be waited for in order to confirm the diagnosis. It exists only in a slight degree at any time, when the obstruction is in the duodenum or jejunum. As a symptom it occurs rather late in the disease and only after some paresis of the bowel muscle has arisen.

In neglected cases of low obstruction, the intestinal distention may be extreme.

A form of tympanites known as local tympanites is described and should be sought for in every case in which the diagnosis is at all doubtful.

This local distention occurs in that part of the intestine immediately above the site of obstruction. This is no doubt due to the

injury to the nerve supply, which causes pain and paralysis, with consequent distention. Then again, in this coil of intestine, disturbances of circulation with oedema and putrefaction of the intestinal contents, with gas formation, will first occur. Its diagnostic importance is due to the fact that the intestine, at the point of obstruction is usually fixed and the distended part early presses against and may bulge the abdominal wall to such an extent that the enlargement may be made out both by inspection and palpation.

Ascites.—Late, in severe cases of obstruction, an appreciable amount of free fluid may be detected in the abdominal cavity. Its presence is a grave sign, since its occurrence is due to a badly damaged condition of the visceral peritoneum, proximal to the point of obstruction.

Shock.—This varies, depending upon the age of the patient and the situation of the obstruction. Children bear the results of obstruction poorly. Shock is most pronounced when the small intestine is the part involved. So marked is this that early and severe shock may be considered evidence that the obstruction is not in the large bowel.

Collapse.—Collapse and dissolution is the ultimate ending of all unrelieved cases of bowel obstruction. The length of time that the disease may exist before a fatal termination varies very much. I have known death to ensue in forty hours after complete obstruction, and again, I have seen patients that have lived more than a week.

Treatment of the Mechanical Obstruction of the Bowel

When the obstruction is due to fecal impaction it may usually be overcome by enemata and purgation. When gall-stones and enteroliths close the gut, spastic contraction is oftentimes a factor in the obstruction, and internal medication for a time is advisable. However, if it does not speedily overcome the difficulty the case becomes one for surgical interference.

The statistics of the treatment of intestinal obstruction, whether by internal medication by the expectant plan, or by surgi-

cal interference, shows a rather high mortality. During the last few years the results of surgical treatment have improved. This is due largely to the fact that delay in operation is not now so prevalent as it was formerly. Physicians and surgeons the world over are more and more learning the lesson that early operation offers the best chance for recovery. Called into the presence of a patient writhing in agony caused by intestinal obstruction, few of us can withhold the ever-ready hypodermic syringe with its load of morphine, pending our arrival at a diagnosis. Nor do I think this is always necessary, since one dose of the drug will not so mask the symptoms as to prevent diagnosis. The effects of the narcotic soon wear off and the symptoms return with all their old time vigor, and our suspicions should be aroused, our examinations completed and definite conclusions arrived at before another dose is given.

It is the administration of the second dose that is reprehensible and which cannot be too severely condemned. It is this second and many after doses that lulls the patient, his medical attendant and his friends into fancied security, until the patient's condition becomes so serious that surgical aid is considered. These are the cases that occasion the high mortality after operation. This is not the mortality of operation, but the death rate of delay.

The administration of purgatives is oftentimes more harmful than is the exhibition of narcotics. No possible good can come from stimulating to greater action the already overacting intestinal muscular wall. As a matter of fact, purgation rather prevents than aids Nature in her efforts to overcome the obstruction when it is outside of the intestinal lumen.

In conclusion, it is fair to say:

First—That opiates and purgatives have no place in the treatment of mechanical obstruction of the bowels, when the cause of obstruction is external to the lumen of the gut.

Second—That a high mortality is due to delay in adopting surgical treatment for these cases.

Third—That early surgical treatment of

bowel obstruction is not only safe, but is the one to be recommended.

THE NECESSITY OF HEALTHY MOUTHS IN THE TREATMENT AND PREVENTION OF DISEASES*

N. G. Slaughter, M.D., Athens

I would not attempt to read a paper before this distinguished body if I did not believe that with a better understanding we, as members of the two professions, could treat some of the diseases of the human body to a better advantage.

This is an age of specializing, and if each one of us can do one thing and do it well, we can be of some service to mankind.

I have chosen for my subject the necessity of a healthy mouth in the treatment and prevention of diseases. Now, what do we mean by a healthy mouth? The teeth free from caries; all of the cavities properly filled and polished; all diseased teeth or roots that cannot be crowned or filled removed; all teeth free from tartar and all foreign substances; the proper occlusion of the teeth in the two jaws, and the gums and mucous membranes free from all inflammation and of the natural color.

To keep a healthy mouth means absolute cleanliness. It is said that a clean tooth will not decay, and certainly a thorough brushing of the gums will usually keep them healthy.

The profession of which I am a member has been striving for the past few years to teach the laity the importance of oral hygiene, but it is a matter of tradition that the public is guided in matters of health by the physician, even in regards to the mouth and teeth.

It has been said that the most successful lawyer is that one which best succeeds in preventing litigation. The best physician is that one which prevents the disease he is called upon to treat. And the most successful dentist is that one which best succeeds in preventing all diseases of the oral cavities.

* Read at meeting of Eighth District Medical Society, Covington, Ga., September 25, 1912.

The mouth, being a perfect breeding place for disease germs, makes the bacteriologic aspect a serious one. Pus in any other part of the body produces grave conditions, but in the mouth they are hardly considered of any importance. I do not believe that a physician can successfully treat any disease of the stomach where the patient has Rigg's Disease. This disease is usually caused from the accumulation of tartar, through pressure upon the gums, and periostium, causing chronic suppuration of the alveola process.

There are cases also associated with uric acid diseases, and it is in these cases that the physician and dentist should be associated in the treatment of the disease. The symptoms are not always alike. Some times the gums are swollen, relaxed and red; at other times the gums stick to the neck of the tooth as a thin, pale layer. Pressure upon the gums above the tooth, however, always causes pus to ooze from the socket of the gums.

Early in the process the teeth remain tight; later they become loose, and finally fall out. The treatment during the first stages is favorable, but after it has progressed too far, no permanent relief can be had except by extraction of the teeth. In some cases you will find broken-off teeth with chronic abscesses, inflammation and swollen gums in children, especially from the ages of four to ten years. This is very often the cause of indigestion, sick headache, and fever. When their mouths are in this condition are they not more susceptible to diphtheria, pneumonia, tonsillitis, and tuberculosis, and many other infections and contagious diseases? The relation between the nose and throat specialist and the dental surgeon is very close. Adenoids are caused from mouth breathing; mouth breathing causes irregularity of the permanent teeth, therefore the inability to properly masticate food. The result is indigestion, auto-intoxication, and malnutrition. Thus returning to the field of the general practitioner. Abscesses of the antrum and impacted wisdom teeth cause conditions that often times require the services of the nose or throat specialist. And exposed nerves in a tooth may cause facial neuralgia, headache, etc.

So I could go on and mention other conditions that interest both the physician and the dentist. In fact, dentistry cannot be divorced from medicine. The stomatologist is as much a specialist as the rhinologist or oculist. The nerves of the teeth and mouth are from the same nerve supply as the nerves of the eyes and the ears. The blood is the same blood that flows through other parts of the body.

I do not think that my specialty is the most important one, but it is so closely allied to the general practitioner, and to the eye, ear, and nose specialist that we should be closer associated in the treatment of some of these grave conditions.

In these few words I have called your attention to some of the evil results of diseased and unclean mouths, and in conclusion I want to call upon the members of your profession to join with us in spreading the gospel of oral hygiene everywhere, and thereby prevent much suffering and help to build humanity into a stronger race of men.

MALARIA*

J. C. Holliday, M.D., Athens

Definition.—An infectious fever, intermittent or remittent in type, characterized by enlargement of the spleen, chills, and anemia and due to the plasmodium malariae of Laveran.

Cause.—The exciting cause is the micro-organism, already mentioned, which gains access to the body through the bites of mosquitoes belonging to the genus anopheles. The predisposing causes are those factors that favor mosquito life, namely, marshy districts, high temperature, humidity and absence of winds. On account of the nocturnal habits of the anopheles the disease is more likely to be contracted at night.

Mode of Infection

That this is possible has been abundantly proven by allowing mosquitoes containing aestivo-autumnal sporozoites to bite

* Read at meeting of Eighth District Medical Society, Covington, Ga., September 25, 1912.

healthy persons, who, after a period of incubation of about ten days, were seized with an aestivo-autumnal type of fever, and the characteristic organisms were found in the blood, though not present previously.

Three Types—Tertian, Quartan and Aestivo

Development of the Tertian Parasite.—The earliest form of tertian parasite is about one-fifth of the diameter of the red cell which contains it, and in fresh blood resembles nothing so much as one of the vacuoles often present in the bodies of the red cells, except that it possesses active amoeboid motion in the substance of the corpuscle. When stained in a dried smear the parasite takes the form of a small ring with a central clear space in which lies the minute spherical nucleus, which can be often stained by thionin or an old Jenner staining mixture, but more certainly by the combination of stains devised by Nocht and modified by Giemsa and others.

There is no pigment in the parasite in the early stages and little or no change in the red cell.

As the organism enlarges the pigment collects towards the center and the amoeboid movements cease. Segmentation then begins and the parasite divides into from 15 to 25 parts or spores. The already distended blood cell now ruptures discharging the spores, into the blood stream, which repeat this cycle. The chills occur simultaneously with the discharge of the spores. For the completion of this cycle 48 hours are usually required, so that a single group of these parasites induces a paroxysm every other day (tertian fever). The presence of two distinct groups sporulating on alternate days gives rise to a daily paroxysm (quotidian fever).

The second form, or quartan parasite, has less pigment of a more coarse quality, less spores, and its segmentation requires 72 hours. One group will cause a paroxysm every fourth day (quartan fever); two groups sporulating on two successive days, the paroxysms will occur on two successive days being separated by an interval of one day (double quartan fever). In the pres-

ence of three such groups daily paroxysms will occur (quotidian fever).

The third, or aestivo-autumnal, parasite is smaller, being about one-half the size of a red blood cell, and contains less pigment than the preceding. Within the blood cell it appears as a group of small hyaline bodies and soon causes the corpuscle containing it to assume a shrunken, crenated, and brassy appearance. After a week or more large ovoid bodies, crescentic in shape, appear in the corpuscles. Segmentation occurs only in the spleen and other internal organs. The entire cycle of this parasite covers 48 hours.

Methods of Examining Blood for Malarial Parasites

It is not necessary to obtain blood for the purpose of making a diagnosis of malaria at any particular time in relation to the chill, because if the patient has the disease the parasites will always be found if sufficient care is taken in searching for them, only excepting in the blood of persons to whom quinine has been administered, and in some cases of black-water fever where the parasites may not appear in the peripheral blood. Even half a gram of the quinine is sufficient to nullify a most careful search for the plasmodia, so that a negative result under these circumstances is of little value.

The examination of fresh preparations is the simplest means for a mere diagnosis of tertian or quartan malaria if the blood can be examined at the bedside, using the technique which has been given under the general discussion of the methods of examination of the blood. If the blood cannot be examined immediately it is far better to make a number of large smears on slides, allow them to dry, fix and stain them with thionin, or better, with eosin and methylene azure, and search through the preparations at leisure with a mechanical stage. This is especially advisable in those cases in which quinine has previously been administered, and in cases in which the blood is taken some hours after the chill in tertian and quartan malaria with a single group of organisms. The small ring forms may be very scanty, and

their recognition in the fresh preparation quite impossible, while in a well-stained slide the recognition of the rings is a simple matter even to the beginner. In searching for aestival parasites, fresh preparations should not be relied upon, for while it is often possible to find crescentic forms and thus make a diagnosis, when the latter are scanty the very small ring forms are often overlooked. There has been a number of mistakes of this sort which would have been avoided if a properly stained eosin-azure preparation had been employed. If the parasite cannot be found by ordinary means, a very thick smear should be made and the haemoglobin removed by placing the slide, without fixing, in a weak solution of watery eosin and then staining with dilute methylene azure. Ruge has suggested a modification of this method which we owe to Ross. Thick smears are fixed in a fluid containing 2% formalin and 1% acetic acid. The slide may now be stained by methylene blue or thionin without any risk of dissolving the cells.

Morbid Anatomy.—The morbid anatomy of malaria includes mainly changes in the blood, the liver, and the spleen—changes that vary with the duration and intensity of the disease, to which, however, they do not always correspond.

As to acute malaria: In the true intermittent fevers there is a loss, sometimes considerable, of red corpuscles, after each paroxysm, which is made up during the intermission. In the aestival-autumnal form the blood losses are greater and more permanent. The absence of leukocytosis is characteristic. In remittent and pernicious malaria—the latter a form characterized by the intensity of the poison and severity of the symptoms—the morbid changes may not be very striking if the patient dies in the first attack, but more marked after a second. The blood is described as hydremic, the serum is sometimes tinged with hemoglobin, and the corpuscles, while containing the parasite, present all stages of destruction. The spleen is enlarged, but not nearly so much as in chronic recurring forms of malaria. It is, moreover, soft and its pulp is dark

from accumulated pigment in the intervascular cords. The liver is enlarged and dark-hued, sometimes described as bronze and sometimes as slate color. Even when not visibly altered to the naked eye, there may be no difficulty in recognizing the excess of pigment within and without the small vessels, some of which may be occluded. In fact, by the aid of the microscope, almost all of the tissues may be found abnormally pigmented, even the brain, some small vessels of which may also be occluded. The kidneys are the seat of pigment deposits, and their cells of cloudy swelling.

In chronic malaria the blood changes are even more marked. There is a positive secondary anemia in which, as usual, the hemoglobin is decreased rather more than the corpuscles. The leukocytes are almost invariably diminished, the polynuclear leukocytes most, while the larger mononuclear forms are relatively increased. Pigment deposits are abundant especially in the spleen, which is enlarged and hard.

In chronic malaria, of whatever form, the enlarged spleen is the most characteristic morbid product. It may weigh as much as ten pounds and measure 25 c. m. long and 10 c. m. to 15 c. m. in width; its capsule is thickened, its substance firm and the trabeculae prominent. Pigmented areas abound due to the plugging with pigment of the intercommunicating lymphoid spaces of the pulp, and in some cases the melanosis is general. The pigment particles resulting from the disintegration of the hemoglobin in the vessels are retained in the spleen, as by a filter.

The diagnosis of malaria is made from the presence of the pigment in the blood, enlarged spleen, the intermittent and remittent types of fever and extreme anemia. In a suspicious case, where the spores cannot be found in a microscopic examination of the blood, the immediate action of the administration of large doses of quinine will prove of great value in making a diagnosis. It may also be well to obtain the location that the patient has resided in regard to being near stagnant water where this genus anopholes is propagated.

The Action of Quinine

Besides the well-known action of quinine in curing malaria, the morphological changes which it produces are of interest.

A large dose of quinine does not necessarily prevent segmentation of large forms, but it may destroy the small merozoites as soon as they are set free in the blood, and both alter the morphology and prevent the development of the ring forms in the red cell. The rings do not stain so deeply as normal; their edges are without sharp contour, and the whole parasite appears as if torn. The nucleus is altered in shape and shrunken.

The larger amoeboid forms are much altered by the action of quinine, showing very numerous pseudopodia, scattering of the chromatin in irregular masses often outside the cell, and altered staining qualities of the protoplasm of the cell body.

In black-water fever, which is generally regarded as a severe infection of the aestivo-autumnal type with but very few parasites in the peripheral blood, the administration of quinine is apt to cause a marked haemoglobinuria within a short time.

Treatment of the Different Forms of Malaria

The treatment of intermittent fever is pre-eminently by quinine. Not only does it break up the paroxysms, but it causes also the rapid disappearance of the plasmodium, which is responsible for them. The dose required varies, but 15 to 30 grains are usually sufficient for an adult. Sometime larger doses may be needed in obstinate cases. It does not matter very much how the drug is administered, but there is a best way for each case. Tyson prefers, as a rule, to give an hourly dose of 3 to 5 grains, beginning long enough before the expected paroxysm to get the quantity previously decided upon into the blood at least two hours before the chill is expected. If the dose first selected fails, the second should be made larger. It is to be remembered, however, that quinine like other drugs, acts more efficiently after a free aperient, while constipation decidedly interferes with its prompt and ef-

ficient action. The most efficient thing for the relief of a chill is from $\frac{1}{8}$ to $\frac{1}{2}$ grain of morphine given just when the chill starts.

The treatment of remittent fever is essentially that of intermittent fever. It is in this form that mercurial aperient is deemed especially valuable as a preliminary by those having wide experience in its treatment. The continued nature of the fever, and the tendency to a typhoid state which often develops demands a liquid diet, with the careful addition of stimulants.

The pernicious form of malaria quinine is also administered as of the other varieties of the disease.

Arsenic is of great value for chronic malaria, Fowler's Solution being the most palatable preparation. It should be given in ascending doses. Iron is often advantageously associated with it, and such combination as a solution of chloride of arsenic and tincture of chloride of iron are especially suitable. A modified Bland's Pill containing, in addition to the carbonate of iron, arsenic in 1-25 gr. doses, is a very efficient and convenient remedy.

Very popular in the hands of some physicians is Warburg's Tincture. It seems to succeed where quinine alone fails.

We are all familiar with the preparation Warburg. By administering this we do not have to contend with the disagreeable effect produced by quinine.

SOME OBSERVATIONS OF PELLAGRA*

T. J. Wills, M.D., Washington

The origin of the word pellagra would make it mean a seizure of the skin, but investigation seems to have shown an involvement deeper than that. It would seem to indicate that every tissue in the body might be involved. At the present epoch the word might be suggestive of degeneration and decay.

The changes found in the brain, spinal cord and in the walls of the blood vessels

* Read at meeting of Eighth District Medical Society, Covington, Ga., September 25, 1912.

are very similar to the changes found in those structures due to degeneration of age. It would seem, too, that when these lesions have occurred, that it is as hard for health to be restored, as it is to have the vitality of youth return in those suffering from the degenerative changes of declining years.

The lesions of the nervous system found in pellagra are similar to those found in chronic ergotism.

Grigorjeff says, he has found on post mortems of animals, that had suffered from chronic ergotism, degenerative changes in the central nervous system, especially in the posterior columns of the spinal cord.

The National Dispensary says of chronic ergotism that the symptoms are very analogous to those associated with lesions of the spinal cord, and especially those of sclerosis of the posterior columns.

Tommini found the microscopic anatomy of pellagra very similar to that found by Tuzek in chronic ergotism.

Lombrosso draws a strong analogy between pellagra and ergotism, both etiologically and pathologically.

Belmondo says in all cases of pellagra he found varying degrees of degeneration of the crossed pyramidal tracts from slight changes with loss of myelin up to an actual sclerosis.

The posterior columns, those of Goll and Burdach exhibited also degenerative changes. The lesions of the posterior columns resembled those of incipient tabes, but in the pellagrous the posterior columns were more involved in the superior dorsal and cervical regions.

Marie says the most noteworthy and constant lesions, and one that may be taken as peculiar to this disorder, is an affection of the spinal cord and especially of its lateral columns. He says the cord lesions, though mainly in the lateral columns, frequently implicate the posterior columns.

The lesions of the lateral columns are shown most prominently in the dorsal region of the cord, while the lesions of the posterior columns are limited to or rather most distinctly marked in the cervical and dorsal regions.

It is noticeable that the lesions of the

nervous system seem to vary considerably in different subjects, as do the symptoms in different patients. Some of the symptoms of pellagra common in one locality are said to be entirely absent in others.

In the district of Pavia contractures and mutism are numerous.

In the district of Verona pupillary anomalies prevail.

The salty taste in the mouth is met with more frequently in Ventia and South Tyrol and Lombardy.

In Lombardy frequent dilatations of the sub-cutaneous capillaries and pain in the back prevail.

In Triest few are insane, but a large number have albuminuria and phthisis.

In the region around Milan epileptiform attacks are frequent, where as they are rare in Pavia and are never met with in Tyrol.

The most frequent complication in Regio is scurvy.

In Magella the cases were slow and intermittent in their course, rarely accompanied by erythema.

In Romagna and Tuscany the course of the disease was more violent and fatal and the erythema more intense.

In Landes suicidal tendencies were rare, while at Cannes such cases were frequent.

In Laragna cases of blindness were numerous.

In Spain coarse tremors of the head were common.

The fact that the lesions of the nervous system, as well as other lesions, vary in different subjects, and that the symptoms vary in different individuals and in different localities, may indicate that the cause is not in all instances identically the same.

It would seem that pellagra is not identical with chronic ergotism, but that it is very similar to it, and if so, it must be caused by something not identical with the cause of chronic ergotism, but by something similar to the cause of ergotism. It might be chronic ergotism more chronic than chronic ergotism.

Some of the symptoms common to pellagra and chronic ergotism are, malaise, inordinate craving for food, vomiting, diarrhoea, headache, disordered vision, tinnitus aurium, formications, numbness of the ex-

tremities, ataxia, convulsive seizures, tonic contractions of the muscles, and mental hebétude followed by delirium or acute dementia.

Now the fungus growth that ergot is gotten from is found on rye. Ergot of wheat has the same effect as well as that of corn.

The occurrence of lesions of the skin in pellagra in the spring or early summer is remarkable. It is certain that they occur when the weather grows warm, and when the rays of the sun are more direct, and they occur on parts of the body most exposed to the rays of the sun.

It is also noticeable that more bread is eaten made of spoiled corn at that season of the year than is consumed at other seasons of the year.

The new crop of corn does not spoil during the cool weather of fall, nor during the cold weather of winter, but when the warm weather of spring comes, if the corn has not been properly dried, it begins to mould and ferment, and the oil it contains undergoes a change.

This is the time of year that the lesions of pellagra begin to develop or recur, and they continue in evidence during the time the spoiled corn is consumed. In the fall when the old crop is exhausted, and the use of the new, sound corn is begun, and the weather grows cooler, the symptoms begin to improve and during the winter, while the corn is still sound and the weather cold, the patients continue to improve until they may seem to be well, and may continue so until the hot weather of spring again spoils the corn, and in that way it goes on from year to year.

It seems that the consensus of opinion is that spoiled corn is the cause of pellagra. Then the statement is made that individuals have the disease who do not eat corn bread at all, nor any product of corn. Now, since that seems to be true, there must be something else than spoiled corn that contains the cause of pellagra.

It has been said that wheat does not cause it, but flour made of wheat will must and the bread made from it will mould and ergot of wheat has about the same effect as ergot of rye or corn.

There are some who think the products

of cotton seed cause it. There may be two ways in which cotton seed might cause it. It may be something the sound cotton seed contains, or it may be something the cotton seed contains after they are damaged that causes it. (The handling of cotton seed is done in such way that a very great per cent. of the crop of seed have abundant opportunity to spoil.) The cotton is picked green and ginned as soon as picked. The green seed are allowed to lie in a large pile as they fall from the gin and they usually heat. Often the seed are allowed to lie unsheltered from the rain. Under such circumstances they decay and in the process of decay something may be produced, that would have a similar effect on the human system, to that of spoiled corn.

The cotton root contains something that has an effect similar to ergot. There might be enough of a similar element in the oil made from the seed, that if taken continuously would cause something similar to chronic ergotism.

It may be that those who think spoiled corn causes pellagra are right, and that those who think the products of cotton seed cause it, are also right.

It would seem that it is not necessary for corn to spoil before it is ground, for the consumer to get pellagra, but it may be ground into meal while perfectly sound, and the meal made from the perfectly sound corn become spoiled after it is ground; and not only the meal may become spoiled, but the meal may be made into bread while it is still good, and the perfectly good bread if kept too long may become spoiled and cause it.

The masses have heard of the cause of pellagra, but they have not yet learned to prevent it.

It would seem that the one way to prevent pellagra is to bring about a change in some way, in the condition of corn when it reaches the consumer. One way to help bring about this, would be to teach the consumer the importance of having good, fresh bread made of good, fresh meal, ground of perfectly sound corn.

Probably the source of greatest danger is from corn that comes from the corn-growing regions of the West, where they cut the corn while yet green, and shock it

in the fields and allow it to stay in the shock until it is convenient to prepare it for market. Being placed in shocks before it has matured or at least before it is dry, the most of the ears being not well exposed to the air cannot dry; and a great number of the ears, in the shock, being exposed to the rain become wet and spoil.

Whether or not it is handled in that way, if it is shelled and shipped, in bulk, before it is dry, it will be spoiled before it reaches its destination. However it is done, we know that much of it, when it reaches the consumer, is spoiled and entirely unfit for food.

Corn can be dried in the dessicators in Spain or Italy for two cents per bushel; it can be kiln-dried in the West for five cents per bushel. How does five cents per bushel compare to the value of the health of the people or to the value of human life?

The pure food law is supposed to have corn inspected. That, doubtless, has helped some. The inspection would have to be very rigid to be a perfect safeguard. Probably every sack of corn in a car would have to be inspected for the inspection to be a perfect protection.

The greatest safeguard would be to educate the consumer. Teach him the danger of using spoiled corn. Create in him such fear of using it, that he will reject it if it is not sound.

If there comes sufficient objection from the consumer, the retail dealer will be more careful to procure sound corn from the wholesale dealer, and that will make the wholesale dealer more careful to procure it sound from the source of supply in the corn-producing regions; and the objection and rejection will go back to the producer of the corn. If the producer learns that he cannot sell spoiled corn, he will begin to handle his corn in such way that it will be sound when placed on the market.

The objection of the consumer, to the spoiled corn ought to be such that no one would dare place corn on the market that is not in perfect condition.

The best way to be sure of having sound corn is to raise it at home and allow it to stay in the fields until it is perfectly dry, and then store it properly.

When we raised corn at home and it was allowed to stay in the fields until the ear turned point downward so that the shuck would shed the water of the rains, and keep the ear dry, and in that state it was allowed to remain in the fields until it was thought to be perfectly dry, and it was then gathered, shucked and housed in a narrow log crib with cracks sufficiently large for the air to pass freely through and dry the corn perfectly, and when wheat was raised at home and was allowed to mature before it was harvested, and when it was cut the bundles were placed in shocks and the shocks were capped to protect the wheat from the rain, and it was allowed to stay in the fields until it was drier still, and after it was threshed it was sunned until it was known to be perfectly dry before it was thought to be in condition for final storing, and when such corn or such wheat was ground into meal or flour and made into bread, something was produced that was fit for food. When we did that way in this country pellagra was unheard of here.

The way corn is now cared for in this country may have much to do with causing pellagra. It is now usually gathered and housed without shucking and without any view of allowing it to dry more after it is stored. Some farmers say it keeps better if the shucks are wet when the corn is stored, and prefer to have a small amount of rain on it just before storing it, or to storing it when the shucks are wet with dew. It would seem that it would be well to have some scientific investigation made to ascertain just when to gather corn and just how to store it to have it keep most soundly. Certainly corn will spoil if it is not properly dried.

It is well to treat pellagra, and do the very best that can be done for those who have it, and cure it if possible, but it is better still to prevent it. One who makes an effort to prevent it may do more for humanity than the one who treats it, even though he may treat it with some degree of success.

What can be done to prevent pellagra? Usually a fact may be established and impressed upon the minds of the people by a great number of people asserting that fact,

and it can be more greatly impressed, and more firmly established if the people who proclaim it are recognized authority on the subject.

Pellagra has gotten to be so widely spread over the country, and the cases are reaching such great numbers, that it seems that it would behoove each one to lend himself to such effort as may be necessary to induce the whole people to make a determined effort to prevent it.

If future investigations should prove that something else causes pellagra, and that spoiled corn does not cause it, one could not have gone wrong in advising against the use of spoiled corn nor in advocating purity of all food.

ETHICAL RELATIONS BETWEEN PHYSICIANS AND PHARMACISTS*

R. C. Wilson, Ph.G., Athens

I am before you to discuss and advise possible "Ethical Relations Between Physicians and Pharmacists", and to make note of some barriers which will hinder us in bringing about these ideal conditions. There is some question, and justly so, if pharmacy is a profession, a trade or merely mereantile in character. Formerly pharmacy was purely professional in character, but conditions have been such that other features than pure pharmacy have become a part, which are necessary to insure a livelihood to those practicing it. These conditions have been induced largely through lack of educational requirements for its practitioners, largely through the demands of a semi-educated public and largely through lack of co-operation between physician and pharmacist.

Our schools of pharmacy endeavor to give instruction only in pure pharmacy and the years of study that a student spends in these institutions is devoted to a study of the principles involved; mainly to acquire a knowledge of the physical and chemical properties and the physiological action of medicinal substances.

Granting then that a pharmacist's train-

ing is along purely professional or ethical lines and that side-lines as avenues of profit are indulged in, just as real estate investments, copyrights on formulas, patents on instruments, etc., are indulged in on the part of the physician as an additional avenue of profit, is not pharmacy just as much a profession as medicine?

Granting that this is true, and that medicine and pharmacy are mutually dependent upon the other, that they are so closely allied and associated, may we not consider that "Ethical Relations" do and must exist?

First let us have a clear definition of Ethics. Webster tells us that it is "the science which treats of the principles of human morality and duty". With this definition before us it would seem that ethical relations between physician and physician, or between physician and pharmacist, should not receive greater consideration at our hands than such relations between man and man. The term as used in the subject of this paper is more in a specialized sense and as such we shall treat it, though based on the general principles of ethics.

The professions of medicine and pharmacy have always been and will continue to be very closely associated with and dependent upon each other. The first physician was a pharmacist, likewise the first pharmacist was a physician. As the science of medicine developed and progressed, and the day of specialization in work began to dawn, the field of each broadened and today they are recognized as distinct branches of a science which has its own aim, the relief of suffering humanity. Their problems have been one, their successes have been due to both and so they will continue to be to the end of time. We must, therefore, labor hand in hand for the still greater things of the future.

We cannot hope to teach ethical relations in our schools of medicine and pharmacy without the fundamental principles of ethics already established: these fundamental principles cannot exist without the proper fundamental intellectual training. So give us educated physicians and pharmacists and the problem of ethical relations will solve itself.

* Read at meeting of Eighth District Medical Society, Covington, Ga., September 25, 1912.

It is gratifying to note in this connection that both the physicians and pharmacists of Georgia are becoming aroused to the situation and are endeavoring to strengthen the laws governing their respective fields of labor. Because of the looseness of these laws in the past, many have been gathered into the ranks of both medicine and pharmacy who are not worthy to be numbered among us, therefore we should protect ourselves in the future.

The professions of medicine and pharmacy interlap to a certain extent and necessarily so, abuses on the part of practitioners in each profession having arisen as a result of this, for we hear from the physician the charge of "counter-prescribing", "indiscriminate sale of nostrums and habit-formers", "inefficiency on the part of the pharmacist", "substitution", "advertising patent medicines", "high charges on prescriptions", "lack of co-operation", etc. While on the other hand, the pharmacist will tell you of the physician "who wants it all and dispenses in a careless manner his cheap pharmaceuticals and chemicals"; he will tell you of the physician who demands "rebates on prescriptions", "Who is a stockholder in a certain line of pharmaceuticals (proprietary in character)", "who expects the pharmacist to give or sell at cost those articles he may need", "who criticises to the patient a charge on prescriptions", etc.

Here we have two evils, each profession equally guilty and the better class of both anxious to relieve the condition. But first let us consider some of these counter-charges:

Counter-Prescribing.—Some pharmacists are guilty of this practice, but it is condemned by the better class. It came about in the first place because of the presence in the drug store of the physician as owner or part owner; in the second place because of the desire on the part of the pharmacist for the few cents profit involved; in the third place because of the lack of confidence on the part of the pharmacist in the physician.

If you could have placed before you the prescription file from some prominent

drug store, and see there the pitiful lack of knowledge displayed by some of the physicians who write them, you would not wonder at this lack of confidence, for gentlemen, it is **SIMPLY AWFUL**.

You will find from fifty to seventy-five per cent. of these prescriptions calling for proprietary remedies, which you might say are "Ethical" since they are advertised only to physicians, but as a matter of fact, they are nothing more or less than patent medicines, the manufacturers of which merely advertise to you because it is cheaper than advertising to the general public and because you are more gullible. You have no guarantee as to their purity or strength, you know nothing of them except what the detail man or the label tells you. Many times they are prescribed because of their suggestive names and you are influenced to use them because of the attractive literature which accompanies them. It does "read good", and so does the patent medicine advertisement to the average lay citizen. Those labels and that literature are the work of artists who are paid well for their deceptive and beguiling arguments. These remedies are exorbitantly high to the patient, and the margin of profit to the pharmacist is exceedingly small. In their use, you lose sight of the patient's welfare both as regards his pocketbook and the benefit he may derive from its use. You are deprived of your individuality, become lazy and inactive, unscientific and withal a menace to the public and a detriment to your profession rather than an honor.

Now when a pharmacist realizes all these things, as all of them do, do you wonder at this lack of confidence in medical practitioners as a whole? Is it not an incentive to them to suggest remedies of their own combination of known purity, strength and virtue and where the margin of profit is much greater?

When Freleigh's Tonic at one dollar per half ounce is prescribed, while all of the ingredients may be found in the materia medica, and the same combination could be prepared at a cost to the patient of twenty-five cents per ounce, if the physician had only studied his materia medica, do you wonder that the pharmacist is con-

vinced that the physician is allowing some one else to do his thinking for him and dictate his line of treatment, that he has no confidence in his own ability? The practice of medicine is made easy (but is it scientific and efficient?) when you have prepared for you, diagnosis and all, your "Tonozone", your "Uritone", your "Boralka", your "Hepatilax", your "Phen-alol", your "Respirazone", your "Sal Hepatica", your "Alkalithia", your "Phosphagon" ad infinitum. The pharmacist is not alone in realizing this carelessness, recklessness, inefficiency or fraud as you may see fit to call it, but the public is waking up, and unless a change is made and the practice of medicine made scientific and efficient in character, the day is not far distant when it will cease to occupy the lofty place in science and society which has been accorded to it in the past.

Dispensing on the Part of Physicians.—There are conditions when this practice is justified and no pharmacist can or will complain of it. On the other hand some practitioners indulge in it when it is not justified. Nor is it ever justifiable, when a reputable drug store in charge of a licensed and efficient man is accessible. No physician has the time nor has he had the necessary training to fit him for the preparation of his own medicinal substances, except in a few isolated cases.

It has been my fortune (good or bad, as you may see fit to call it) to see the line of chemicals carried by some of these men, and I am yet to find any chemicals manufactured by Merek, Squibb or any other reliable manufacturer, or any pharmaceuticals with Wyeth's, Parke, Davis & Co.'s or Sharp and Dohme's labels on them, displayed on their shelves. They explain this by the fact that these goods cost too much. They carry only a very small assortment, "just use what they happen to have", regardless of the particular needs of the case. Now if they are practicing medicine on an innocent and unsuspecting public with an eye solely for the few dollars involved, they are **not** reputable physicians and should not be accorded such recognition. On the other hand, they should be black-listed and advertised.

Rebates on Prescriptions.—This nefarious practice cannot be condemned in too forcible language. Any physician who would demand this, or any pharmacist who would submit to it, should be ostracised, black-balled and forever labeled as a traitor to his fellow man.

Physicians as Stockholders in Proprietary Medicines.—When a patient becomes aware that this practice is being indulged in, when he realizes that when he walks into a physician's office and after a cursory examination he has written for him a prescription for some proprietary remedy already prepared, on which said physician realizes on the side a profit of from 25 to 40%, it will not be long before he seeks another man who desires not alone his hard earned dollar, but to give value received. Such is as it should be.

Patents and Proprietaries.—The sale of patent medicines represents a large portion of the pharmacist's business, in fact much larger than any department of his business. Really because of the small margin of profit on a large portion of the prescription business many pharmacists will tell you to "go to hell with your prescriptions". The pharmacist is loath to give up this business, though if sufficient margin of profit could be realized on prescriptions, and the physician would write only for ethical preparations, you would find many pharmacists in the State giving up the patent medicine business and confining themselves to strictly professional lines. A large number of these patents are worthless, many are harmful, while many are remedies of virtue. You will find that many pharmacists admit this fact and would co-operate in any manner with the physician in the restriction of their sale. There will undoubtedly come a time when we have drug stores conducted along purely professional lines, but only when the physician co-operates in establishing favorable conditions, and when his knowledge of *materia medica* and of physiological action dictates a prescription which is peculiarly adapted to the case in hand. Stereotyped prescriptions and those of the ready-made variety should be discontinued, your medical training should have been

such as would fit you to write your own prescription. Study what to write for and how to write a prescription. You have the confidence of the public, merit it.

Habit-Forming Drugs.—Much has been said in regard to the promiscuous sale of these drugs. The responsibility rests somewhere either on the wholesale or retail druggist or on the physician. The responsibility should be placed where it belongs and the offenders cut off.

There are some drug stores in Georgia which supply these articles in violation of the State laws and of every moral law. Reputable pharmacists discountenance the practice as much as any other upright citizen, as evidenced by the fact that the Legislative Committee of the Georgia Pharmaceutical Association contributed everything in their power toward the framing and passage of this law.

But, gentlemen, there are licensed practitioners of medicine who **make** a livelihood (I will not say they **earn** a livelihood) furnishing these drugs and by writing prescriptions for alcohol. This is a practice, thank God, for which the medical profession as a whole does not stand convicted. You should spurn these members of your profession, cast these vampires from you; they taint everything with which they come in contact, they are sucking the life-blood of this noble profession. You are not so much aware of these practices as the pharmacists. If you care to rid yourselves of them, take the pharmacist into your confidence and he will tell you some things which will make your blood boil—he will call names if you will stand for it. Do you care to have aligned with you these villains who prey upon the ignorance and weakness of humanity,

Criticism of Charges Pro and Con.—

There are many times when a patient will complain to the physician of the charges on prescriptions, and I am sorry to say that there are many times when the physician will stab the pharmacist in the back and poison the mind of that patient against the pharmacist, when, as a matter of fact, the physician had no idea of the cost of the materials involved. For instance, I had a prescription some years ago for one dram

of eserine sulphate to be made into a one-ounce ointment, the physician telling the patient that it would cost a quarter, when the eserine alone would have cost just **nine dollars**. There are many times, too, when the pharmacist has an opportunity to criticize, to the patient, a physician's charge and by a single word or a suggestive smile destroy the confidence of that patient in the physician. So it would seem that it behooves us to act as a mutual protection one to the other, and we can do this only through co-operation and with confidence one in the other, not alone as regards proficiency, but integrity.

Drug Stores Operated by Unlicensed Men.—Here is an evil which the pharmacists alone should handle and thus protect themselves at the same time they are protecting the public. But the physician can contribute much toward relieving this condition by failure to patronize such places. He should do this for his own protection and for the protection of his patients.

I do not blame a physician for directing to which drug store his prescriptions should go, for naturally he has more confidence in one pharmacist than another and usually he has reasons, and good ones, for exercising this choice.

Now, as a remedy for these conditions, what shall I suggest? What shall you suggest? What feasible suggestion can be made?

You have already taken a step toward a solution of these problems when you invite pharmacists to this meeting to address you. This spirit should be encouraged, both on the part of the physicians and pharmacists of Georgia. Local associations and societies should have members both from the reputable physicians and pharmacists. State associations should welcome an interchange of delegates from the brother associations. A spirit of frankness, generosity, earnestness and of confidence should be displayed and in the end we will have a united brotherhood working in a great and glorious cause.

Skin sutures must not be closely placed in fat subjects. Provision should be made for the escape of fat droplets.—*American Journal of Surgery.*

ON THE TREATMENT OF PNEUMONIA*

B. W. Lockhart, M.D.

There are certain mechanical conditions in pneumonia that should engage the most careful consideration of the physician, because they furnish clear indications for rational treatment.

One of these is the shortened condition of the breathing which evidently favors the accumulation of carbon dioxide in the blood. This limiting of lung function increases the coagulability and viscosity of the blood, thereby causing it to stick or settle on the tricuspid valve, and on the walls of the pulmonary artery. This condition is sure to retard the blood-stream, and retardation of the blood-stream, water-hammer, and saturation of the blood with carbon dioxide are powerful factors leading to a fatal issue. For the relief of such a condition morphine is thought to be our most effective agent, given with the needle in $\frac{1}{8}$ to $\frac{1}{4}$ grain doses every three or four hours.

In each case of pneumonia a battle is to be fought for the rescue of the patient on such grounds as are suggested by the peculiar merits of the case. A careful reconnoiter then should be made to find out who the enemy is, where he is, and what he has to fight with.

I once thought in the years gone by that starvation, high temperature, and heart-failure made up a death-dealing trio that swept its millions away in this disease. For a long time it was thought to be the three-fold enemy that won the victories for this great captain of the hosts of death, but now the important points to which our attention is called are not to give number of depressing remedies that were, till recently looked upon with as much confidence as the sea captain does upon his sheet anchor, to put the patient in the best condition to outlive the attack, and to recognize and meet complications as soon as they appear.

Without making mention of the many

clinical varieties of pneumonia it might be best to refer to one variety known as abortive pneumonia. There is an abortive form of pneumonia and abortive treatment is a big success in such cases, but a failure in all others. Pneumonia is a self-limited disease, running its course usually in from five to eleven days, and no specific treatment is known for it at the present time. The cases that end within two or three days are abortive cases and our patrons say that the doctor tore it all to pieces before it got much of a start. But what they say when we fail to tare it to pieces is something else.

A room with a temperature of about 70° is the best for a pneumonia patient, and the apartments thoroughly ventilated. A hot foot bath may be given and 5 grains each of calomel and rhubarb with $\frac{1}{4}$ grain of podophyllin. Ten grains of quinine sulphate should be given, and repeated in 3 or 4 grain doses two or three times a day. It must be a supporting remedy, and it is thought to mitigate serious inflammation. It is well to use counter-irritation in the first stage, especially in children, and ground mustard is the best agent, mixed with twice as much flour as mustard, and made into a thin paste with vinegar. In sthenic cases, during the first stage veratrum seems to do good, and may be given in 3-drop doses of Norwood's tincture every two hours, till faint nausea is felt and the pulse is soft and slow, and the skin moist and relaxed. After the first stage has passed and consolidation is established I withdraw veratrum and take an all round look to see what can be done. A reasonable amount of suitable nourishment must be given at proper intervals and medicines to mitigate suffering and promote sleep. The stomach must be kept in as good condition as possible for vomiting occurs occasionally in almost every case. Inquiry should be made daily as to the condition of the kidneys and they should be stimulated to perform their function if the urine becomes scanty. The bowels should be kept open. The physician should attend to all these points daily, and examine the heart carefully at every visit. The heart is under the greatest strain in pneumonia of any organ in

* Read at meeting of Ninth District Medical Society, September 18, 1912.

the body, and if blood is coagulating on the tricuspid valve or plugging up the pulmonary artery the doctor should know it the same as he should know the extent of the pulmonary inflammation and the temperature and the pulse rate. Our success depends largely always upon our thorough knowledge of any disease in any person under our treatment, and this is especially true of pneumonia. A word on heart stimulants and their use is necessary to complete this paper. The heart stimulants generally used are strychnine strophanthus, caffeine citrate, aromatic spirit of ammonia, digitalis and alcohol. It is unnecessary to discuss the merits of these drugs, for some prefer one and some another, but the danger of stimulation of the heart in pneumonia is **overstimulation**. Heart-stimulation is often needed, but overstimulation never, for overstimulation produces exhaustion. Let it be remembered that the heart itself is a willing worker and will do its best, but the temptation to overstimulation is very great when the radial pulse is irregular before the crisis, or when it gets to 140 to the minute, and the heart greatly dilates.

The mechanical obstruction in the lesser circulation caused by pulmonary consolidation is a thing that physicians desire to look into, because the question is not what should we do, but what can we do to win out in such a fight.

Only a few more words on what occurred under my own observation and then what is written is written and read, too. I have seen four cases of empyema that entirely recovered without incision and they took nothing but hypophosphites for a long time. They were well marked in their symptoms, and incision might have cured them sooner, but they eventually recovered without it.

NOTICE

The widow of a former officer of this Association, who has had considerable experience in nursing, desires a position as companion for convalescents or semi-invalids. No objection to travel. Address, Journal of the Medical Association of Georgia, Augusta, Ga.

THE VALUE OF THE X-RAY IN THE DIAGNOSIS OF FOREIGN BODIES*

A. B. Elkin, M.D., Atlanta

Assistant to the Chair of Operative and Clinical Surgery, Atlanta College of Physicians and Surgeons.

There is probably no condition in surgery that warrants more immediate or accurate diagnostic vigilance than that of foreign bodies, regardless of their position or source. Certainly, there is no subject more intimately related to Roentgenology, and the field is a broad one, particularly since the value of the Roentgen rays has been proven in demonstrating substances formed within the body.

Indeed, the discovery of this aid a little more than a decade ago has proved a revelation in determining the nature of unseen conditions until today it is relied upon either for diagnosis or confirmation. Its uses are now many and constantly increasing in the obscure conditions that confront the physician when the clinical and usual laboratory methods fail to clear the diagnosis.

The part it plays in the surgery of foreign bodies stands out clearly. No case of this nature should admit of a final conclusion until the X-ray plate has told its story, and in many instances the clinical evidences will be found misleading.

The value of any X-ray work, however, depends entirely upon the following factors:

First—An experienced operator. The best equipment made is of no use in the hands of one not familiar with the intricate details of preparation, manipulation, development and interpretation.

Second—A good equipment is essential. Economy in the matter of an X-ray is not economy if it amounts to the purchase of an inferior machine.

Third—and most important—is the interpretation of the plate. To the novice the reading of a difficult plate is as impossible as the translation of an unstudied language. This, of course, is a matter of experience pure and simple.

The routine practice of using the X-ray

* Read at meeting of Seventh District Medical Society, Rome, Ga.

where there is a history of a foreign body divulges many interesting things; the rapidity, for instance, with which a substance that has gained entrance into the tissues changes its position; the demonstration of foreign bodies located entirely by accident when the same was not suspected; or an exposure made to locate a substance with the discovery of one or more. In fact, it has been my experience to demonstrate a stone in the left kidney with the same exposure that showed a ureteral stone well down in the pelvis of the right side. In this case the renal stone was not suspected. The subject was, fortunately, a man of small stature and it was possible to get the shadow of both kidneys and ureters on the plate used, which was one eleven by fourteen inches. Had the left kidney not been included the renal stone would have been unknown until later clinical symptoms developed.

In a railroad employe there was a history of sudden pain in the right eye during employment in the railroad shops. The pain subsided to some extent in thirty or forty minutes and he resumed work. In a short time, however, he was again compelled to leave his work on account of the pain. Vision was becoming imperfect. Twenty-four hours later he was referred to an ophthalmologist, who in turn referred him to me. It was impossible to make a satisfactory examination with an ophthalmoscope owing to the hemorrhage that had occurred. Two exposures were made, one laterally and one antero-posteriorly, both of which showed a foreign body about half the size of a pea located in the vitreous. Since the patient worked in a steel shop, we at once assumed the object to be a piece of steel, and Dr. A. W. Stirling, of Atlanta, removed the same with a magnet. Fortunately, the line of exit was the same as that of entrance and no further laceration resulted. When last heard from, one month after the operation, the patient had vision in the eye. He then passed from our observation.

For exposures of this kind, that is, for substances that have gained entrance into the body, the preparation is very simple, requiring practically none at all unless it be in some portion of the alimentary canal.

Errors in diagnosis can result, however, if the rays are not properly focused. If there is reasonable assurance that the foreign substance be limited to a certain area, accuracy in the direction of the rays should determine its position precisely. The focus should be directly downward and localized as much as possible to include the suspected field.

In the case of a little girl five years old, there was a history of having drawn a tack into the nose during a paroxysm of sneezing thirteen months before. From this time until I saw her the history was extremely vague. The parents recalled several severe attacks of pain in the chest and had noticed variation and at times difficulty in the child's breathing. Several weeks before the little girl became very ill and ran a high temperature. She was being treated for tuberculosis and was taking tuberculin.

When I saw her she had the characteristic breathing of a foreign body in some portion of the respiratory mechanism, and a temperature of 105. The plate showed a large tack in the right bronchus just below the bifurcation with accompanying abscess and evidences of an old pneumonia. She was afterwards operated upon and died.

From the point of surgical interest, the demonstration of bladder, ureteral and renal stones has made the X-ray a great factor in the diagnosis of these conditions. Its contribution to surgery stands out pre-eminently in conditions with such variable symptomatology, making possible confident diagnosis. It is here that the result is directly dependent upon the technique of the operator. If a stone be present, assuming the tube used possesses sufficient penetration, and a negative plate results, then the operator is at fault.

Thorough preparation of the patient is the first essential for calculus shadows, and this requires at least twenty-four hours. This will obviate the possibility of the "suspicious shadow" and leave little doubt as to whether a stone be present. It is not infrequently the case, however, that a second and even a third confirmatory exposure is necessary to make a positive diagnosis. It is possible that a dilated portion of a ureter can become so filled

with collargol after an injection that a shadow is cast closely resembling that of a stone. Of course, a second picture without an injection will determine this question.

The so-called "soft stone" has a definite interest for the Roentgenologist since it is said the shadow cast is precisely that of a formed stone. It has never been my experience to skiagraph this interesting condition.

My procedure for preparation is as follows: Starvation for twenty-four hours. Thorough purgation, preferably mercurial followed with a large dose of castor oil to insure that the intestinal tract is entirely empty. The patient is then placed in the dorsal position with the knees slightly flexed. The reason for this is purely mechanical, since it brings the structures in close contact with the plate beneath. The exposure is made while the patient holds the breath in expiration with instructions to relax the abdominal muscles. This allows better penetration of the rays. I use from fifty to seventy mileamperes from full power, the length of the exposure varying with the size of the patient.

The most interesting foreign body of my experience was the demonstration of a needle in the substance of the kidney around which had formed a stone, the needle projecting at right angle. I could not classify the shadow of the needle, and it was not determined until operation. I mention this very interesting case by permission of Dr. W. S. Goldsmith, of Atlanta, who removed the substance at the Grady Hospital. No history of how the migrating needle gained entrance into the body could be obtained. The patient was a young girl, fourteen years of age, who had some of the classical symptoms of stone. Dr. Goldsmith catheterized the kidney and injected a ten per cent. collargol solution before the exposure was made.

The above cases have been selected from a collection to briefly call attention to the great importance of the X-ray in dealing with foreign bodies, particularly cases of suspected stone. Since the danger to the patient from the rays has been minimized, there is certainly nothing to be lost in relying upon this aid.

I do not assume that the subject of foreign bodies has been a neglected one, yet the progress made in the line of work recently, together with the recognition it is now given by the profession, will undoubtedly tend toward more accurate diagnosis and allow much more sanguine prognoses.

NAKED-EYE PATHOLOGY OF THE URINE*

A. L. Fowler, M.D., Atlanta

Professor of Genito-Urinary Surgery and Venereal Diseases in the Atlanta College of Physicians and Surgeons; Genito-Urinary Surgeon to Grady (Municipal) Hospital and St. John Infirmary; Member American Urological Association, Etc.

We all know, of course, that normal urine is a more or less yellowish or amber transparent fluid, that it has an odor peculiar to itself, termed urinous. A 24 hours' specimen, when the person is on a mixed diet, is faintly acid in reaction. This is due to acid sodium phosphate. In exceptional cases we find urine that gives both an acid and an alkaline reaction, the latter being due to an alkaline phosphate. This double reaction is termed **amphoteric** and seldom is of any particular significance.

The color of normal urine depends for its intensity largely upon the pigment it contains, viz., urochrome, etc. Urine of great acidity is likely to become darker upon standing, due to oxidation of its chromogens.

Urines of a pale, light color are usually of a low specific gravity and give only a slight acid reaction, and the paler the color the greater the dilution and amount. In a general way the darker the color the greater is the molecular concentration, hence such urines are rich in urea and are not highly acid.

Freshly voided normal urine is perfectly clear, but if it be left at rest a few hours a hazy cloud forms about its center and very gradually settles to the bottom. This cloud is known as **nebecula** and it will entirely disappear if the urine is agitated. It consists largely of mucus, of epithelia from the upper layers of the bladder and,

* Read by invitation before the Seventh District Medical Society, Rome, Ga., October 9, 1912.

in the female, from the upper layers of the vagina.

After urine stands for very many hours it becomes ammoniacal, due to bacterial development, and soon becomes turbid or opaque, particularly if exposed to a warm temperature. So much, in brief, for the appearance of normal urine to the naked eye.

Naked-Eye Pathology

If we would detect pathological conditions, as disclosed by the urine to the naked eye, the patient should not only give us a 24 hours' specimen, but he should also pass his urine for us on another occasion from a moderately distended bladder, into two glasses. From the former we measure the total amount voided for the 24 hours, we observe its color and transparency and note its odor and reaction. We set aside a portion for centrifugalization to examine microscopically and which, by the way, is the most important examination of all, and for a careful chemical analysis. Animal (guinea-pig) inoculation should be done if the urine looks suspicious of tubercle.

From the two-glass test, in conjunction with the 24 hours' specimen, we are enabled to determine many things simply with the naked eye, hence the title of this paper.

Pathologically, an increased amount of urine is known as **polyuria**, a decreased amount as **oliguria**, and complete suppression as **anuria**.

If the amount is much in excess of the normal we suspect diabetes mellitus or insipidus, notwithstanding the specific gravity is comparatively low and the color pale or even straw-yellow. This, of course, is presumptive, for in many cases of chronic nephritis, cirrhosis of the kidney, hypertrophied heart, hysteria and convulsions, we find a notable increase. On the other hand, if we note a considerable decrease we **suspect** an acute inflammatory condition of the kidney, having in mind at the same time that acute inflammatory conditions elsewhere may cause the decrease.

If the urine is pale in color and particularly if it has a suggestion of a "milky

tint", plus a low specific gravity, we should be on the alert for tuberculosis of the kidney. In such lesions the amount is usually increased with sometimes only a faint trace of albumin. If ulcers or abscesses have formed the sediment is profuse, otherwise it is practically absent or only slight.

When uric acid is present in large amounts it readily adheres to the sides of the glass in the form of reddish masses, the so-called "**brick-dust**" sediment.

Perhaps the most common sediment found in urine is that of sodium urate. It produces to naked-eye pathology the **clay-water** sediment.

Cystine is not a normal ingredient of the urine and certain persons urine contain it instead of uric acid. When present in small quantities it gives an odor likened unto sweet brier. Since cystine contains much sulphuretted hydrogen if present in large quantities it gives the urine a fecal odor. Its irritating effects cause an inflammation known as **cystinuria**. To naked-eye pathology it gives to the urine a greenish yellow color with occasionally a grayish white precipitate.

If the urine is turbid it is usually due to an increase of the amorphous urates or earthy phosphates. The former are increased with a nitrogenous diet and the latter with a vegetable diet. Acetic acid will clear the solution if due to phosphates, while boiling it will clear it if due to urates.

When the phosphates are very abundant they set up an irritation known as **phosphaturia**, which gives similar symptoms to an **oxaluria**. Urotropin, and often simply a change of diet will correct it.

In urine in which an alkaline putrefaction has taken place in the bladder we frequently find flaky deposits due to the precipitation of phosphates. They may also appear as a **whitish granular** sediment, while the urates are more apt to appear as a **clay-water** sediment.

Freshly voided ammoniacal urine, in the male, is strongly suspicious of hypertrophied prostate, tumor, stricture or stone.

A mouldy and greenish color is ob-

served in the urine when the penicillium glaucum or brush fungus is present. Other causes of a greenish hue are methylin blue and bile (billi-verdin) and the bacillus pyocyaneus. A greenish black is sometimes imparted by salol, and a brownish black by resorcin.

When the conditions are such as to cause the urine to become strikingly viscid, when it appears stringy and mucopurulent, we suspect the bladder, since such a urine not infrequently is the result of a chronic cystitis. Present also is a distinct ammoniacal odor and a great amount of phosphates. In malignant, particularly carcinoma, diseases of the bladder, the urine has a peculiar, repulsive odor and once acquainted with it is not easily forgotten.

Severe cases of diabetes gives the urine a peculiar, sweet, wine or fruity odor, while a fecal odor should and does suggest recto-vesical fistula, or the presence of cystine in large amounts.

Turbid urine, in pathological conditions, may be due to the presence of bacteria in large numbers, even in freshly voided urine, when it is known as **bacteriuria**. A cloudy, hazy specimen, of course, suggests albumen, but we cannot, simply with the naked eye and without the aid of chemicals and the microscope, determine this.

Mucin (nucleo-albumin) resembles albumin to naked-eye pathology. The former, when present in large amounts, appears shortly after the urine is voided as a cloudy, ropy, jelly-like mass and sinks to the bottom of the vessel.

In all inflammatory conditions of the uro-genital tract mucus is increased, and frequently is perceptible to the naked eye as light twisted filaments which do not sink rapidly in freshly voided urine. The so-called gleet threads are purely conglomerations of mucus entangled in which are pus corpuscles and epithelia. Uric acid crystals in sufficient quantities (**uraturia**), oxalic crystals (**oxaluria**), cystine crystals (**cystinuria**), and phosphatic crystals (**phosphaturia**) all produce an irritation and occasionally a discharge if sufficiently abundant. The "ropy" appearance of the urine, in chronic cystitis, is

due to such an abundance of mucus. If a spermatocystitis be also present the sperma may mix with the mucus when the mixture appears as pale, flaky masses entangled with spermatozoa.

Fat occasionally exists in urine in large amounts as in rare cases of **chyluria**, when the filaria sanguinis hominis should be searched for. Large quantities of albumin are always present in addition to the fat and the urine is turbid or even "milky" when first voided. Occasionally it is of a pinkish tinge due to the frequently present red blood corpuscles. By reason of the presence of a large amount of fibrin such a urine contains suspended pink coagula which are formed in the bladder, and produce distressing symptoms. After standing a creamy layer rises to the surface. A few drops of sulphuric ether will somewhat clear the milky supernatant layer.

Where only a small amount of blood is present the color of the urine need not be changed, but if a large amount be present the color of the urine as well as its sediment will be brown, reddish-brown or even red. Some of the causes of hematuria are: distoma haematobium, chronic prostatitis, tumor, filaria sanguinis hominis and stone. Occasionally an oxaluria has been found to be the cause. In haemaglobinuria the specific gravity varies, but as a rule it is increased; also the sediment is abundant.

In chronic interstitial nephritis the sediment varies but is usually small. In cirrhosis of the kidney (chronic catarrhal) the color of the urine is pale and frequently is increased to double the normal amount. In acute croupous nephritis the amount is greatly decreased and in fatal cases may be reduced to or even below three or four ounces in the 24 hours. The color varies but is pale in the later stages; and the sediment, which is abundant, when once separated, is mixed with the watery portion with difficulty.

Waxy degeneration of the kidney may occur in both catarrhal and croupous nephritis; being more common in the former and rare in the latter. The appearances of the urine are those of a chronic nephritis, with a varying sediment.

In atrophy of the kidney the amount of urine voided in 24 hours is never as abundant as in cirrhosis of the kidney. As a rule the sp. gravity varies between 1010 and 1004.

In suppurative nephritis (surgical kidney) the urine is always cloudy with a pronounced heavy sediment, a sp. gravity usually below normal together with a diminution in amount.

With the two-glass test, simply with the naked eye, we can learn much. It is better to always have the patient's bladder at least moderately full of urine when he is directed to urinate into one of the glasses, and just before he finishes have him pass the remainder of the bladder contents into the second glass.

In **acute anterior** urethritis such a test would show a cloudy urine in the first glass and a clear urine in the second glass. In sub-acute anterior urethritis the findings would be a less cloudy urine with admixture of threads, the second glass being clear. In **chronic anterior** urethritis the first glass would show clear urine, but with admixture of mucus threads and pin-hole dots, the latter from the glands of Littre in the floor of the urethra and the crypts of Morgagni in its roof.

In **acute posterior** urethritis the first glass would contain cloudy urine, while the last glass would contain blood as a result of the muscles of the prostate squeezing down upon the posterior urethra in their effort to force out the few remaining drops of urine, thereby rupturing some of the tiny and delicate capillaries in the highly inflamed mucosa—hence the terminal hematuria. If the suppuration in the posterior urethra be abundant, why, of course, it will flow along the line of least resistance (the external vesical sphincter or cut-off muscle being in a state of tonic contraction) and contaminate the bladder contents, in which case both the first and second glasses would be cloudy, but the second glass, in addition to its cloudiness, would also show blood. In **chronic posterior** urethritis, if we wash out the urethra down to the cut-off muscle before the patient urinates, the first glass will be clear with threads (prostatic urethral urine) and the second glass will be clear.

In **marked** chronic prostatitis the first and second glasses are usually clear, but they also contain very frequently Furbinger's hooklets, which are comma-shaped in appearance and rapidly sink to the bottom of the glass. They come from the mouths of the prostatic ducts and are composed of mucus, epithelia and pus corpuscles.

In some instances chronic prostatitis causes extravasation of red blood cells—hence a hematuria. We wash the urethra out down to the cut-off muscle, and with the patient's bladder moderately full, a number 10 or 12 French catheter is gently passed into the bladder, when an ounce or so of urine is withdrawn. If the urine through the catheter return clear, we withdraw the catheter and request the patient to urinate in a glass. If the glass shows bloody urine we know the hemorrhage is necessarily coming from the prostatic urethra.

In a general way it may be stated that the more arterial the hue of the urine, the closer is the hemorrhage to the urethra and bladder, since when the two-glass contents show a uniform discoloration, generally dark, the hemorrhage is likely to be seated in the kidney. Clots, in the shape of angle or earth worms, suggest the kidney pelvis or possibly the ureter as the seat of the hemorrhage.

BIBLIOGRAPHY

Hurry, Fenwick, Albarran, Leguen, Heitzmann, Walbarst.

The more money The Journal of the Medical Association of Georgia makes out of its advertisements the less it costs the State Association to run the paper. This means that every member of the State Association has an interest in the advertising columns. If one business firm advertises and another does not, patronize the one that does. It is money in your pocket.

FOR SALE

One Truax-Green Compressed Air tank, set in table; best grade. Price, \$15.00 f. o. b. Augusta.

Address
Journal Medical Association of Georgia.

MY OBSERVATIONS AND PERSONAL EXPERIENCE ON THE IMPROVED TECHNIQUE OF ETHER VAPOR AND THE NITROUS-OXIDE-OXYGEN ANAESTHETICS

T. J. Collier, M.D., Atlanta

I wish to present some features in the new and improved technique of the vapor and nitrous-oxide and oxygen anaesthetics, which are not, probably, generally well known.

My vapor apparatus was devised by Dr. James T. Gwathmey, of New York, and bears his name, The Gwathmey Vapor Inhaler. It is composed of three bottles, two of which are graduated, one from $\frac{1}{2}$ ounce to 4 ounces for ether, another from $\frac{1}{2}$ dram to 10 drams for chloroform, the third containing warmed water. The top is composed of one stop-cock, or index plate, so arranged that a known percentage of ether or chloroform, or the two combined with air, or air alone, may be given by compressing a bulb, or foot pump, with each inhalation. The air mixed with ether or chloroform or both, in varying proportions, escapes into the warmed water and rises to the top of the bottle, entering into the tube on the outside of the plate leading to face-piece, which is an ordinary Esmark mask with a tubular base perforated with a few holes on the inner side to allow exit of the warmed vapor. There is also a tube for introduction into either the nasal or oral cavities to be used in place of the face mask for operations about the nose, mouth and throat, but especially useful in cleft palate work, adenoidectomy, tonsilectomy, etc. In these cases the vaporized anaesthetic may also be introduced through a special mouth gag, which is hollow and perforated to allow the escape of the gases into the posterior portion of the buccal cavity.

I have observed that with the use of this apparatus, one can produce a very light, at the same time regular, narcosis, owing to the fact that the patient gets the warmed vapor on each inhalation as the bulb or pump is compressed, a little in advance of each inspiration. Consequently the patient gets practically all the vapor

and not a large portion of it blown off over the room by each exhalation.

It takes very much less anaesthetic than any previous method I have used, the average being four ounces of ether to the hour, while some take this amount with a dram of chloroform. By a glance at your index, you can tell just what percent or proportion of ether or chloroform, or the two combined, your patient is getting.

The warmed vapor is not so irritating to the mucous membranes, consequently, there is less danger of either pneumonia and bronchitis following. It is not so nauseating as when given by the open drop or closed methods, nor so likely to develop kidney or liver complications as the system is not so thoroughly saturated with the drugs. Neither is the opsonic index so greatly lowered, as had been recently proven by Dr. Evarts A. Graham, in his report of experimental work with ether, and showing the following results: That after an ordinary ether anaesthetic, there was a reduction of the phagocytic power of the blood—the degree of reduction depending on the length of anaesthesia and the amount of ether absorbed. The different experiments lasting over periods of from two days to several weeks. The depression apparently was due to a direct effect of the ether on both leucocytes and serum, and not to any effect on the bacteria themselves.

As I have said before, I can produce very light narcosis by the Gwathmey warmed ether vapor method, and have had patients begin to show signs of reacting in three or four minutes after removing the mask. As Dr. Gwathmey says, "you can keep your patients almost within calling distance all the time". Of course one can produce most profound anaesthesia by increasing the force of compression on the bulb, and giving full ether, or ether and chloroform, in large proportions.

But more particularly do I wish to call the Association's attention to the nitrous-oxide and oxygen apparatus, and the administration of these gases as a general anaesthetic. The apparatus that I have devised by Dr. R. P. Peairs, of Milwaukee, Wis. I found after using it on several patients, some disadvantages in

not having an attachment for using ether if desired. My experience has been in certain cases, especially in alcoholics and athletes, that it is hard, or almost impossible, to get complete muscular relaxation without the assistance of a little ether or chloroform. To this apparatus I have added an ether attachment so that any amount of ether may be given, from a very slow drop to a stream, to overcome the muscular rigidity; or a small quantity mixed with the gases to reduce their expense. When ether is added we do not have a true nitrous-oxide and oxygen anaesthesia. I have found even the addition of small quantities of ether increases the tendency to nausea and vomiting. The ether attachment is the Gotch Ether-Mixing Chamber, of the Gotch Nitrous-Oxide-Oxygen-Ether Apparatus, of Baltimore, with some changes to fit my apparatus.

I have also added the Teter face mask, which has a positive pressure valve that can be so adjusted as to get any amount of re-breathing, from no re-breathing to full re-breathing, if desired. To my mind, partial re-breathing is quite an advantage, as it diminishes waste and helps to warm the gases in the bag before the next inhalation. The warmed gases are more readily taken up by the blood than cold, consequently not so great an amount of the gas is required to produce and maintain narcosis. The warmed gases are less chilling to the mucous membrane of the respiratory tract than the unwarmed gases, and as we do not want to chill our patient, especially in conditions where we usually use nitrous-oxide and oxygen, I think the warming chamber in connection with the apparatus quite an advantage.

I do not think this an ideal anaesthetic as a routine, especially in the hands of every surgeon, even with an expert as the anaesthetist; but it is a splendid anaesthetic for the very delicate and painstaking surgeon, as I have noticed the more tenderly the tissues are handled, especially those of the abdominal cavity, the easier and smoother the anaesthesia, together with a marked reduction in the amount of shock, which is the most important of all. It has been clearly demonstrated by Dr. George W. Crile, of

Cleveland, Ohio, that rough handling and manipulation arouses the brain cells, and to quote R. J. Morris, "It seems to me that the object lesson of the result of conserving the patient's natural resistance, has opened the vista of a new epoch in surgery. Our faces are now turned toward Metschnikoff and Wright with their descriptions of phagocytes and opsonins, and of the natural protective force of the patient. We are to conserve the natural resistance of the patient and to turn him over to his phagocytes and anti-bodies as helpful as we can. This is the new principle turning the tide of battle only, and leaving the patient with his phagocytes as nearly intact as possible. It is quite as important for the patient to retain his natural resistance after operation, as it is for the surgeon to add artificial means for securing asepsis during operation. "The first stage of surgery was heroic, the second was anatomic, the third was pathologic, and we are now about to enter upon the fourth, or physiologic stage of surgery. Immunity is to be the watchword of the day. Behold the dawn of the fourth era of surgery lighting up the horizon!" (Extract from the Fourth Era of Surgery).

In all septic and toxic cases, where the patient needs all his phagocytes, I know of no other anaesthetic that equals or approaches that of nitrous-oxide and oxygen. My limited experience has shown such a marked difference in the immediate and after effects on the patient, that to my mind, this is the anaesthetic of choice in such cases. The patient usually awakes in a few minutes after removal of the mask; does not have the depression usually shown after other forms of anaesthetics, nor the nausea which is a source of great and positive danger to the patient. They are usually able to carry on an intelligent conversation before leaving the operating room, and begin to improve immediately, provided, of course, they are not already surcharged with toxins.

The ages of the patients I have used this anaesthetic on range from nine months to 95 years, and for almost every condition met with in surgery. A few of which are appendectomies, including acute

abscessed and gangrenous appendices, twelve; cerebral abscess, one; amputations, two; gall-stones and other conditions met with in gall-bladder surgery, seven; hysterectomies—vaginal, one; laparotomies, other than those above mentioned, eight; nephrectomies, four; prostatectomies, suprapubic, eight. In the 86 cases in which I have used this anaesthetic, the average length of this administration has been 39 minutes; the longest, 1 hour and 50 minutes, with no mortality.

The administration of this anaesthetic requires more skill and practice on the part of the anaesthetist than other anaesthetics to give an even, smooth anaesthesia and to keep relaxation, at the same time the proper percentage of oxygen to keep the patient in a pink glow. I find that the average patient takes about five to six per cent. of oxygen.

The expense is somewhat higher than the ordinary anaesthetics, but this increase in cost is more than compensated by the reduction of mortality in septic and asthenic conditions generally, by the comfort of the patient, and by the reserve and conservation of all his vital forces.

DISCUSSION ON DR. COLLIER'S PAPER

Dr. W. A. Selman said he was very much interested in Dr. Gwathmey's method of administering anaesthesia, and especially when operating upon patients with hair-lip; in such cases his method was of great value because the operator could work without stopping, whereas if one used the drop method, or the Esmarch inhaler, it would be necessary, in these operations, to stop work while the patient was being anaesthetized and so the work would, of course, be delayed. So far as he knew there was no irritation caused by the presence of the tube in the posterior nares. The warmed gas he had not used, although he believed that it would give better results.

Dr. W. B. Hardman, Commeree, said that he had always been interested in anaesthesia and that he had recently made the rounds of quite a number prominent

Western and Eastern hospitals, and he found that most all of the Western men begin with nitrous-oxide and oxygen and continued with ether, except at the Mayos' in Rochester, Minn., where the drop method of ether was employed throughout. In Dr. Murphy's clinic one nurse had given something like fifteen thousand (15,000) anaesthesias and without a single death. There was given usually morphine and atrophine before the administration of the anaesthesia. In the Mayo clinic they had given something like sixty thousand (60,000) patients ether without a single fatality from the anaesthesia. Dr. Crile gives nitrous-oxide and oxygen gas; his apparatus was rather complicated, but he reduced his mortality fifty per cent. (50%) by his nerve-blocking and the use of this anaesthetic. However, Dr. Hardman did not believe that this method would ever become popular because the apparatus required was too expensive and it was, in short, too expensive for the general practitioner to use it; ether anaesthesia would and should be the anaesthesia for universal use. In New York there was used a very complicated apparatus. The apparatus used warmed the anaesthetic and seemed to work well, administering the ether automatically—at least it was spoken of as a good method by most of the men who were using it.

Dr. J. R. B. Branch, Macon, said that this question of the administration of an anaesthetic was one of absorbing interest, and the giving of oxygen with nitrous-oxide had revolutionized modern surgery. However, he could not see what advantages accrued to them from the employment of such complicated machines as were advised; no one could see any advantage from the use of such complicated apparatus. The guide to what was going on was the condition of the patient, and the simpler the apparatus, the better. He referred to one apparatus which could be purchased for about fifty dollars (\$50), and with this ether could be administered for only a few minutes or for a long time. The field for the use of oxygen and nitrous-oxide anaesthesia was, in his opinion, an increasing one. He had seen such

anaesthesia given as long as four hours. As a matter of fact, these machines were not so expensive as most people thought them to be; the cost of the oxygen used was about two dollars (\$2) an hour, and sometimes less.

With regard to the mixture of ehloroform and ether, the former was, in his opinion, dangerous and even more so than when employed alone. The dangers concerning the use of any anaesthetic depended upon the administrator; many who were simply internes in the hospitals were intrusted with the giving of anaesthetics, but today it was different because they had been taught that it required a man of experience and training to give anaesthesia.

Dr. E. G. Jones, Atlanta, said that there was a certain equanimity of mind given to the operator when one knew who was giving the anaesthetic; very often the man giving the anaesthetic was more responsible for the outcome than the operator himself. Dr. Jones did not believe, however, that the giving of nitrous-oxide-oxygen gas would ever displace entirely the giving of ether as a routine measure. This should not be considered as a substitute for ether. Dr. Jones said he had used it in all kinds of operations, and he was particularly pleased with his results in septic infections.

Dr. J. L. Campbell, Atlanta, said there was nothing connected with an operation that interested him more than the administration of the anaesthetic, and he always felt safer when he knew the man who was giving it. Less than one week ago he attempted to operate upon an appendiceal abscess with a local anaesthetic because the patient had a double aortic murmur, but the patient was so nervous that this was impossible and he had to resort to general anaesthesia, with no ill effect. Dr. Campbell thought that he could mention at least two or three cases in which death following within a few days was due to the ether—the ill effects of the gas itself.

With regard to the use of nitrous-oxide gas and oxygen in place of ether or ehloroform, in many instances he would prefer the ether; especially had he found

ether more preferable in operations upon the upper abdomen. In operating upon any structures connected with the diaphragm the patients certainly, in his experience, did not take nitrous-oxide gas and oxygen as well as they did ether, but by all means there should be a competent anaesthetist instead of some one who knew nothing about this sort of work.

Dr. T. J. Collier, Atlanta, did not consider the Gwathmey apparatus a good one for starting the anaesthesia; he started his patients off with nitrous-oxide gas, and then switched to the vapor apparatus. One should be very careful that no mistakes occur in the giving of these vapors; that is, the ehloroform for the ether. This apparatus is not intended for the administration of ether and ehloroform combined, alone, as some of the gentlemen seem to get the impression; but is so arranged that a known per cent. of the two combined can be given when indicated, or ether separately and ehloroform separately may be given, in a known percentage.

The anaesthetic of choice is of course to be chosen in each individual case and that to best advantage after a great many administrations. Before beginning the use of the Gwathmey apparatus, he used the open drop method; but with this method there is so much of the anaesthetic blown off over the room that after investigation he found the Gwathmey apparatus took much less of the anaesthetic, then, too, more smooth and regular anaesthesia was produced. Also the patients came out from under the anaesthetic sooner, with less nausea, because they were not so thoroughly saturated with the drugs.

Dr. Collier did not think that nitrous-oxide-oxygen was an ideal anaesthetic in all surgical cases, but was certainly an ideal anaesthetic in all toxic cases. In septic cases where we did not wish to reduce the patient's vitality, in which cases it was so very necessary to keep up their vitality and not have it lowered still further by the administration of ehloroform or ether, it was the only anaesthetic of today to give our patients the best chance of recovery.

ELEVENTH DISTRICT MEDICAL SOCIETY

The following program was presented at the seventh semi-annual meeting of the Eleventh District Medical Society, held at Waycross, November 18-19, 1912:

November 18, 8.00 p. m.

"Illustrated Lecture on Syphilis"—Dr. Montague, L. Boyd, Atlanta.

Discussion—General.

Royal Banquet—At La Grande Hotel.

November 19, 10.00 a. m.

Society Called to Order—President H. C. Welchel, of Douglas.

Invocation—Rev. O. F. Cook, Waycross.

Welcome Address in Behalf of the Ware County Medical Society—Dr. J. C. Rip-
pard, Waycross.

Response—Dr. A. G. Little, Valdosta.

Solo—Mrs. B. G. Parks, Waycross.

Welcome Address in Behalf of City of Waycross—Hon. H. D. Reed, Mayor Way-
cross.

Response—Dr. Dallas Williams, Folk-
ston.

Reading Minutes of Last Meeting—Sec-
retary.

Reports of Committees.

1. "The New Gospel of Health"—Dr. T. J. McArthur, Cordele.

2. "The Prevention of Pellagra"—Dr. H. F. Harris, Atlanta.

3. "Sanitation in the Home"—Dr. J. R. McMichael, Quitman.

Discussion—Led by Dr. S. S. Gaulden, Quitman.

4. "Milk as a Carrier of Disease Germs"—Dr. S. L. Vinson, Nicholls.

Discussion—Led by Dr. T. W. Dorsett, Willacoochee.

5. "Sanitation in the School"—Dr. T. D. Mann, Health Officer, Brunswick.

Discussion—Led by Dr. J. W. Simmons, Brunswick.

6. "Second Summer Complaint"—Dr. C. A. Coleson, Jesup.

Discussion—Led by Dr. J. G. Tuten, Jesup.

7. "The Prevention of Tuberculosis"—Dr. A. Griffin, Valdosta.

Discussion—Led by Dr. J. M. Smith, Valdosta.

8. "Observations from the Practice of Midwives"—Dr. J. L. Walker, Waycross.

Discussion—Led by Dr. A. Fleming, Waycross.

9. "Sanitation in the Railroad Coach"—Dr. G. G. Thomas, Chief Surgeon A. C. L. R. R.

10. "Report of Hookworm Work in the Eleventh District"—Dr. W. F. Abercrombie, Atlanta.

Annual election of officers.

The American Surgical Association has appointed a committee, consisting of Drs. William L. Estes, South Bethlehem, Pa.; Thomas W. Huntington, San Francisco, Cal.; John B. Walker, New York City; Edward Martin, Philadelphia, and John B. Roberts, chairman, 313 South 17th Street, Philadelphia, to report on the Operative and Non-Operative Treatment of Closed and Open Fractures of the Long Bones, and the value of radiography in the study of these injuries. Surgeons, who have published papers relating to this subject within the last ten years, will confer a favor by sending two reprints to the Chairman of the Committee. If no reprints are available, the titles and places of their publication are desired.

JOHN B. ROBERTS, Chairman,
313 S. 17th St., Philadelphia, Pa.

The more money The Journal of the Medical Association of Georgia makes out of its advertisements the less it costs the State Association to run the paper. This means that every member of the State Association has an interest in the advertising columns. If one business firm advertises and another does not, patronize the one that does. It is money in your pocket.

When preparing the radial artery for transfusion it is very important to gently dissect out and tie with very fine ligatures the branches of the vessel in the field. If any of these is torn or bruised, a clot will form in it which, by extending into the radial, will interfere with or prevent the flow of blood.—American Journal of Surgery.

THE JOURNAL OF THE MEDICAL ASSOCIATION OF GEORGIA.

300-302-304 Harison Bldg.

SUBSCRIPTION

PRICE.....ONE DOLLAR PER YEAR

SINGLE COPIES of this calendar year, 15 cents; of the previous calendar year, also 15 cents; two years old, 20 cents; three years old, 25 cents; in other words, 5 cents additional is charged for each year preceding the last calendar year.

REMITTANCES should be made by check, draft, registered letter, money or express order. **Cur-rency should not be sent unless the letter is registered.** Stamps in amounts under one dollar are acceptable.

CHANGE OF ADDRESS notice should give both the old and the new address, and state whether the change is permanent or temporary. The change notice must reach us ten days in advance of the date of the issue which is to be forwarded to the new address.

WARNING: Pay no money to an agent unless he presents a letter showing authority for making collection.

ADVERTISEMENTS

Advertising forms go to press eight days in advance of the date of issue. In sending in copy time must be allowed for setting up advertisements and for sending proofs. No proprietary medicines can be advertised until approved by the Council. Advertising rates will be sent on request.

CONTRIBUTIONS

EXCLUSIVE PUBLICATION: Articles are accepted for publication on condition that they are contributed solely to this journal.

CONTRIBUTIONS TYPEWRITTEN. Authors should have their contributions typewritten—double-space and with ample margin—before submitting them. The expense is small to the author—the satisfaction is great to the editor and printer. We cannot promise to return unused manuscript, but try to do so in every instance. Manuscript should not be rolled or folded.

ILLUSTRATIONS: Half-tones and zinc etchings will be furnished by THE JOURNAL when satisfactory photographs or drawings are supplied by the author. Each illustration, table, etc., should bear the author's name on the back. Photographs should be clear and distinct; drawings should be made in black ink on white paper. While we cannot guarantee to return used photographs and drawings, we use our best endeavors to do so after the article is published, if the word "return" is written on the back of each.

ANONYMOUS CONTRIBUTIONS, whether for publication, for information, or in the way of criticism are consigned to the wastebasket unread.

NEWS: Our readers are requested to send us items of news of a medical nature, also marked copies of local newspapers containing matters of interest to physicians. We shall be glad to know the name of the sender in every instance.

HOLD YOUR ANNUAL MEETING THIS MONTH

As will be noted in the report of the First Conference of State Secretaries, which occurred recently in Chicago, it was recommended that the fiscal year of all State Associations correspond with the calendar year.

This will make it necessary for all county societies to hold their annual meetings and elect officers during the month of December, so that their annual reports may be in the hands of the State Secretary on the first of the year. This is admirable for several reasons. First, in

order that the State Secretary may have time to get all county reports properly placed before the annual meeting of the State Association. Second, that he may be able to make his annual report to the American Medical Association at the beginning of the year, and thus save any member the embarrassment of being dropped from the rolls of the American Medical Association. Third, to enable the State Secretary to make a complete report to the Association at its annual meeting. As is well known this has always been impossible for the reason that county secretaries do not report until the very last day possible and in consequence the officers of the State Association never know "where we are at".

At present the fiscal year of the county societies in Georgia begins January 1st and ends December 31st, and any member who has not paid his dues before January 1st is in reality not a member and is not eligible to membership in his State and National organizations, but this rule has purposely been made very elastic heretofore in order that all members desiring to pay their dues may do so, but this rule must of necessity be more rigidly enforced in the future so that when the State Secretary makes his report to the American Medical Association, he may be able to report every doctor in the State who is eligible, and the National Association will not be forced to carry as members those who are not eligible, nor drop from the rolls those who may be.

This is greatly due to the delay of the county secretaries in making their reports, and if they would attempt to realize the difficulty of properly attending to over one hundred letters daily, which has to be attempted by the State Secretary for about six weeks prior to our annual meeting, I am sure they would be more prompt.

The Secretary will during this month write personal letters to every county president and secretary in the State requesting that they call their county societies together at once, and will likewise send blanks for the making of annual reports. If you do not receive a notice of such meeting you may know that your county officers are derelict in their duty,

and you should replace them with others who are more attentive.

In this connection allow us to make a suggestion. Do not elect the youngest member of your society as its secretary unless he is also the most energetic member. Think over the entire membership and elect for secretary the man who takes the greatest interest in medical progress in your county. He alone can give you a good county society.

MEDICAL IMPORTANCE OF PANAMA

On the completion of the Panama Canal, there will be a readjustment of routes of commerce and travel, which will radiate from the canal to all parts of the world. The western coast of Central and South America will then constitute a definite sanitary menace to the United States. Close contact by ship with the ports where yellow fever, cholera and small-pox are always present, not to mention a host of other infectious diseases, will expose our Atlantic and Gulf ports to the constant peril of epidemic invasion. It will probably fall to the Public Health Service to provide against this new danger. The present quarantine service embraces a chain of fifty-three stations encircling the United States, New York being the only important port not covered by the federal service. The Public Health Service also includes Porto Rico and Hawaii in its quarantine protection, and administers the quarantine of the Canal Zone. The maritime traffic which will converge at the Canal Zone will bring with it large numbers of sailors of all the nations, including the United States, and a medical relief station will be necessary. The Journal of the American Medical Association says that a large marine hospital should be erected at some favorable location in the Canal Zone, either at sea-level or in the mountains; it would find a large and increasing field of usefulness, and in fact will be almost a necessity. Out-patient offices at Colon and Panama should be equipped for emergency and ambulance cases, and as receiving stations for the marine hospital. There is a unique opportunity in the Canal Zone for the establish-

ment of a laboratory for the investigation of tropical and subtropical diseases. The clinical material which will be available from all parts of the world, especially from Central and South America, will afford opportunity for valuable studies of diseases which will soon be even a greater national menace than at present.

THE EARLIEST KNOWN PAIR OF SPECTACLES

The facts that the Chinese have long known of spectacles and that snow spectacles have been employed by the Samoyed tribes near the arctic circle have been frequently remarked on in books of travel and Layard found a plano-convex lens of rock-crystal in the ruins of Nineveh; but that these oriental races knew of the use of eye-glasses before the fifteenth century is a matter of grave doubt. All European references to the use of spectacles before the year 1270 are dubious. Pliny's description of Nero looking at the gladiatorial combats in an emerald means at best only a lorgnette, or most probably a reflecting mirror. Roger Bacon seems to have known of magnifying lenses (1276), which soon became common enough, but the probable inventor of spectacles as such was a Florentine worthy on whose tombstone in the church of Santa Croce is the inscription: "Here lies Salvino d'Armato degli Armati of Florence, the inventor of spectacles. May God forgive his sins. [He died] Anno Domini 1317".

Early in the fourteenth century, spectacles were mentioned in the writings of Bernard de Gordon, Arnold of Villanova and Guy de Chauliac, and they were afterward figured in the pictures and public documents of the period, such as Jan van Eyck's Madonna at Bruges, Martin Schongauer's engraving of the Death of Mary, the decorations of the altar of St. Jacob's Church at Rothenburg an der Tauber or the drawings in a Ratisbon manuscript of 1600, now in the Germanic Museum at Nuremberg. All these indicate huge circular lenses mounted in rings of black horn or leather, united by a short leather band and fastened by another band pass-

ing around the head, the lorgnette and pince-nez patterns with metal mounts appearing later.

Prof. R. Greeff, of Berlin, after a long search in different museums and collections has at length found the earliest known specimens of the old leather-mounted type of the sixteenth century. These are now to be seen in the Pirkheimer room in the Wartburg (near Eisenach, Thuringia), and were discovered behind the wooden wainscoting of Willibald Pirkheimer's chamber at Nuremberg in 1867. Pirkheimer's spectacles consist of eight pairs, the lenses mostly sprung or broken, and clouded through some changes in the glass. The eye-glasses of this period were called "nose-riders" because they straddled the nose and had to be supported by the hand from the side or above when used for reading. They were very expensive, says The Journal of the American Medical Association, costing from \$45 to \$75 a pair, and must have been a costly layout for even a wealthy Nuremberg patrician of the sixteenth century.

CONFERENCE OF STATE SECRETARIES

One of the most important meetings since the reorganization of the American Medical Association at St. Paul in 1901, was the Conference of the Secretaries of State Societies, called by the Committee on Uniform Regulation of Membership at the Association headquarters, Chicago, October 23 and 24. This committee was appointed in 1908, in accordance with a recommendation made in the secretary's report for that year. At the Atlantic City session, last June, the committee summarized its reports for the last four years, and recommended that a conference of State secretaries be authorized to consider the entire question of membership conditions in the county, State and National organizations. This recommendation was referred to the Board of Trustees and a conference between the committee and the State secretaries was authorized by the Board of Trustees, to be held at the same time as the October meeting of the board. Appropriations were made for paying the

expenses of all State secretaries who attended the meeting. The conference was called to order at 10.30 a. m., Wednesday, October 23, at the Association building in Chicago, by Dr. Thomas McDavitt, secretary of the Minnesota State Medical Association, and chairman of the Committee on Uniform Regulation of Membership.

The Attendance

Thirty-eight States were represented, the roll showing the following in attendance:

Dr. W. W. Watkins, Phoenix, Ariz.
 Dr. C. P. Meriwether, Little Rock, Ark.
 Dr. Philip Mills Jones, San Francisco, Cal.
 Dr. G. W. K. Forrest, Wilmington, Del.
 Dr. W. C. Lyle, Augusta, Ga.
 Dr. E. E. Maxey, Boise, Ida.
 Dr. E. W. Weis, Ottawa, Ill.
 Dr. Charles N. Combs, Terre Haute, Ind.
 Dr. J. W. Osborn, Des Moines, Iowa.
 Dr. L. R. DeBuys, New Orleans, La.
 Dr. W. B. Moulton, Portland, Maine.
 Dr. W. S. Gardner, Baltimore, Md.
 Dr. H. D. Arnold, Boston, Mass.
 Dr. Wilfrid Haughey, Battle Creek, Mich.
 Dr. Thomas McDavitt, St. Paul, Minn.
 Dr. E. F. Howard, Vicksburg, Miss.
 Dr. E. J. Goodwin, St. Louis, Mo.
 Dr. H. D. Kistler, Butte, Mont.
 Dr. Joseph M. Aikin, Omaha, Neb.
 Dr. Martin A. Robison, Reno, Nev.
 Dr. D. E. Sullivan, Concord, N. H.
 Dr. Thomas N. Gray, East Orange, N. J.
 Dr. R. E. McBride, Las Cruces, N. Mex.
 Dr. John Ferrell, Raleigh, N. C.
 Dr. H. J. Rowe, Casselton, N. Dak.
 Dr. J. H. J. Upham, Columbus, Ohio.
 Dr. Claude A. Thompson, Muskogee, Okla.
 Dr. M. B. Marcellus, Portland, Ore.
 Dr. C. L. Stevens, Athens, Pa.
 Dr. J. Perkins, Providence, R. I.
 Dr. Edgar A. Hines, Seneca, S. C.
 Dr. Perry Bromberg, Nashville, Tenn.
 Dr. H. Taylor, Fort Worth, Tex.
 Dr. W. B. Ewing, Salt Lake City, Utah.
 Dr. C. H. Beecher, Burlington, Vt.
 Dr. Grant Calhoun, Seattle, Wash.
 Dr. Charles S. Sheldon, Madison, Wis.
 Dr. W. H. Roberts, Sheridan, Wyo.

No representatives were sent from Alabama, Colorado, Connecticut, District of Columbia, Florida, Kansas, Kentucky, New York, South Dakota, Virginia and West Virginia. No effort was made to secure the attendance of the secretaries of the Hawaiian Territorial Medical Society, Medical Association of the Isthmian Canal Zone or the Philippine Islands Medical Society, as these secretaries were too far removed from the place of meeting to make it possible for them to attend.

The Program

The following program was carried out:

1. Call to order, Dr. Thomas McDavitt.
2. History and Development of Membership in the American Medical Association and Its Component Parts, Dr. F. R. Green.
3. Some of the Difficulties of the Present Situation, Dr. A. R. Craig.
4. Remedies Proposed by the Committee, Dr. Thomas McDavitt.

Discussion

A general discussion of membership regulation was conducted under the following heads:

1. Fiscal Year. Should the fiscal year coincide with the calendar year? Should the fiscal year be the same in all county and state societies?
2. Should membership expire automatically at the end of the calendar year, and a new roster for each county and state society be made with the beginning of each year?
3. When should membership reports from county secretaries to state secretaries be due?
4. Should the dues of new members, joining after the first of the year, be prorated for the remainder of the year?
5. Should an admission fee be required in addition to the annual dues?
6. Should uniform application blanks, receipt blanks, and membership and transfer cards be adopted?
7. Should constituent state associations hold charters from the American Medical Association?
8. Should a uniform plan for the transfer of members be adopted?

In addition to the above Dr. George H. Simmons, editor and general manager, discussed the question of membership in the American Medical Association, and the changes in name proposed by the Board of Trustees.

Report of the Committee on Recommendations

After two days' discussion it was evident that the secretaries present were agreed as to the advisability of a uniform fiscal year for all parts of the organization, to coincide with the calendar year, and that they favored the expiration of membership at the end of each year and a complete revision of the membership rolls at the beginning of each year. The committee on recommendations, consisting of Dr. E. J. Goodwin, Missouri State Medical Association; Dr. Wilfrid Haughey, Michigan State Medical Society; Dr. Perry Bromberg, Tennessee State Medical Association. Dr. William S. Gardner, Medical and Chirurgical Faculty of Maryland, and Dr. F. R. Green, secretary of the committee and of the Council on Health and Public Instruction, brought in a report recommending the adoption of provisions on these two points, and that all other points be deferred for further consideration. The report of the committee follows:

The Committee on Recommendations herewith submits the following report:

1. We recommend that this conference endorse the plan of having the fiscal year coincide with the calendar year in all parts of the organization. We further recommend that secretaries of all state associations which have not already adopted this provision bring this matter to the attention of their associations and recommend its adoption.

2. We recommend that constituent state associations adopt provisions making dues in component societies payable on January 1 of each year, and requiring county secretaries to report to state secretaries all members in good standing, together with their per capita assessment for the current year not later than March 31. State societies desiring to do so may provide a shorter period.

3. The recommendation regarding the

third question under discussion is covered by our recommendation of the second.

4. Regarding the prorating of dues, we recommend that this be made optional with each component society.

5. Regarding an admission fee for membership we recommend that this be made optional with component societies.

6. While the committee recognizes, as a general principle, that a uniform system of blanks for county and state societies is desirable, as soon as practicable, we recommend further consideration of this question at a later conference.

7. We recommend that the House of Delegates of the American Medical Association be asked to consider the advisability of issuing charters to constituent state associations.

8. We recognize the desirability and advantage of a uniform method of transfer, but this system cannot be established until there has been developed a greater uniformity in other details of organization. We, therefore, recommend that this question be made the subject of discussion at a future conference.

9. The committee recognizes the value of this conference to the state association secretaries, and to the purpose of organization; it therefore recommends that future conferences of this character be held.

The report of the committee was unanimously adopted by a rising vote. It was also moved and carried that the secretary be requested to send copies of the report to each state secretary and to each state journal, and that the proceedings of the conference, as published in the "Bulletin", be furnished to each state secretary desiring

them, in sufficient quantities to send one to each member of the state association. After a vote of thanks to the Board of Trustees for making this conference possible by the appropriation, the conference adjourned.

After a transpleural intrathoracic operation, as on the esophagus or lung, airtight drainage of the pleural cavity must be provided for.—American Journal of Surgery.

If suppuration of the root of the nail does not soon subside after providing drainage, it may be necessary to remove the nail. This should not be done too hastily, however. Persistence in daily disinfection of the space (iodin, hydrogen peroxide, etc.) and stimulation of the tissues (as by massage) will often be rewarded by saving the nail.—American Journal of Surgery.

In the removal of small foreign bodies there is a rule to make the incision at an angle to the long axis of the object, and when the latter is quite superficial this hoary advice is good. But when the object is buried more deeply, the incision should be made parallel to the underlying muscle fibers.—American Journal of Surgery.

Paronychia may often be thoroughly drained by gently passing the knife point between the nail fold and the lunula without cutting the true skin. Disinfect with a drop of tincture of iodine, insert a tiny gauze drain and apply a small wet dressing.

IMPORTANT NOTICE!

There will be two vacancies in THE MACON HOSPITAL HOUSE STAFF after January 1, 1913, as two of the present house doctors' service is out at that time. Please advise any one desiring the position to write to

Dr. J. P. HOLMES, Sec'y Medical Board, Macon Hospital,
MACON, GEORGIA

The service here is for two years.

TUBERCULOSIS

C. H. RICHARDSON, M.D.
Montezuma

T. E. OERTEL, M.D.
Augusta

J. H. HAMMOND, M.D.
LaFayette

GEORGIA SHOULD SAFEGUARD HER PUBLIC SCHOOLS FROM TUBERC- ULOSIS, BY REQUIRING A MEDICAL INSPECTION OF HER SCHOOL CHILDREN

In the intricacies of nature, "times change and we change with them". In the not far distant past, it was thought that man was produced into this world and that God would take care of him, and when the time came for him to die it was foreordained that he should die whether it be in infancy or due to the doctor's prescription.

But in this enlightened age, the days of automobiles, telephones, aeroplanes, etc., the man who is not up to his job, whatever may be his calling, should and must drop out and let his superiors take his place at the helm. The day has passed for mediocracy—gas without substance—the truly intellectual will outstrip his brother who may not be so well prepared.

This much for the introduction of my subject. We are the guardians of the health of the people in our communities. It is our duty to forewarn our people against any infectious or contagious disease in our community. The means should be given by which such diseases might not spread. So as it is in all common contagious diseases, so much so should it be in that insidious disease (that few are able to diagnose in its incipency) that kills and destroys one-fifth of all the people who die annually. I refer to tuberculosis. The State has provided sanitariums for the treatment of not only tuberculosis, but for any imaginary ailment that man or child falls heir to. But she has provided no means of preventions of such diseases or means to prevent their contractions.

So is it not up to the State to require a medical inspection of her wards, who are under her care, while giving them free

instruction in the public schools of the State?

Take, for instance, the anaemic child—pale face, lacking in red corpuscles, white, colorless eyes—no hectic cough, but a descendant of a tuberculosis family. Would it not be well that the State should not only have an inspector to find out whether this child has incipient tuberculosis? If so found to be, to segregate him and prevent further infections. Such children should not only be inspected and segregated, but placed in open air-rooms or rather rooms out of doors that God's free air and sunshine should play around them all the daytime.

The advanced idea today as to inspection of our public school children for adenoids, hypertrophied tonsils, strabismus, etc., should also include a medical inspection for contagious and infectious diseases, such as scarlet fever, diphtheria, small-pox, chicken-pox, and above all, tuberculosis.

I believe that the State should pass by legislative enactment, a law requiring the appointment of a medical inspector for each county in the State. These inspectors should visit the public schools of their respective counties at the beginning of each session, fall and spring, and make a careful inspection of each pupil regarding the ills above mentioned. Such inspector should be one who is capable and has had sufficient training and ability to recognize the diseases when encountered.

The future of medicine will not be so much in the treatment of the diseases as in the prevention, and our State should awaken to this fact, that tuberculosis is an infectious and a contagious disease, and while its progress is not so rapid in the child as in the older person, yet we should also realize that in the child the disease (tuberculosis) can more easily be thrown off if detected in time, and by wise and judicious treatment, such as wholesome

food and outdoor life, going to school where the child can be taught in the open air, given sufficient outdoor exercise, it will begin to develop—red corpuscles will re-appear in the cheeks and in the finger nails; the tuberculosis which has infected this delicate frame will disappear as the child grows healthier and more robust and thus the grave is robbed of its victim.

Why, then, should Georgia not take a hand in this progressive age to save the children of the State who are to make the future men and women? It is up to her to start this initiative in this great movement. And right here let me state that if I can get the co-operation of the medical profession of the State I will try to have such a legislative enactment passed at the meeting of the next General Assembly, but without their assistance I can accomplish but little.

C. H. R.

“DOES GOD FIX THE DEATH RATE?”

A broad-minded clergyman in his Tuberculosis Day sermon propounded this question and reached a conclusion decidedly negative. “God does not fix the death rate”. Who does then? We all do.

Those theologians aid high death rates who ignore the demonstrated facts of preventable disease and seek to perpetuate the medieval superstition that infections are the Almighty's merited scourge. Laymen who flout the scientific proof that tuberculosis is curable and can be eliminated from human experience, or who disparage a tuberculosis propaganda as of no personal concern to them, help to cause the death of a consumptive every three minutes in the United States. Councils and legislatures which will not appropriate funds sufficient for the fight which health boards would wage against the Great White Plague are largely responsible for the death of ten thousand a year, twenty-seven deaths every day, in one city alone. Those who disregard antisputting ordinances and the like help to send the death rate upward. Housewives whose culinary efforts produce dyspeptics directly and drunkards indirectly give far more impetus to the upward trend of the death rate than most of us imagine. Venders of “patent medi-

cines” and consumption cures who fleece their victims until the latter have passed far beyond the incipient stage in which physicians could have helped them—such nostrum-fakers have a full share of responsibility for the thousands on thousands of deaths from tuberculosis throughout the country. Those who draw profit from feeding the poor on adulterated food, “rots and spots”, and fowls dead in storage several years back, have a similar responsibility for a high death rate.

A “league for medical freedom” organized to prevent the wise centralization and co-ordination of health activities and to oppose the inspection of schools and school children likewise helps to keep the death rate high. Those who overwork women and children in factories have a heavy share of responsibility for holding the death rate at a high level; so also do those employers who require men to work at dangerous trades under intolerable conditions, such as those which in some trades hold the consumption rate above 80 per cent. House owners who provide dark, insanitary, pest-ridden tenements have no little part in increasing the death rate. The Christian Scientists and other faith “healers” who close their eyes to the possibilities of material aid, that may often so potently be added to the psychotherapy they are employing, swell the death rate. Well-meaning mothers, who believe that they are able to bring up their children in defiance of the new-fangled notions of hygiene spread by physicians and visiting nurses, help to keep the death rate high. Most important of all, says The Journal of the American Medical Association, incompetent and careless doctors swell the death rate. For these the medical profession is directly responsible, whether they are untrained men turned out by low-grade medical schools, or members of the profession who have failed to keep up with scientific progress and who have become incompetent through inertia and laziness. All these, by their carelessness, indifference and ignorance, increase the death rate, which competent and conscientious physicians, sanitarians and reformers are fighting to lower.

SURGERY

W. F. WESTMORELAND, M.D.
Atlanta

C. W. CRANE, M.D.
Augusta

R. P. GLENN, M.D.
Columbus

TREATMENT OF WOUNDS WITHOUT DRESSINGS

By S. Coville, M.D., *La Presse Medicale*, Paris,
June 8, 1912

The author says the difficulty in securing a satisfactory dressing after such operations as the radical cure of hernia, especially in children, is well known. However well applied, the dressing tends to be displaced and its liability to be soiled with urine often renders it a danger rather than a protection to the wound. On the other hand, wounds of the face or those made in such operations as circumcision, heal readily without dressings when protected from contact with the patient's fingers. Healing by first intention should be as readily obtained in larger wounds under similar conditions, as an accurately sutured incision after an aseptic operation presents but slight points of entry for infection. The writer began by dressing cases of herniotomy with a simple pad of sterilized gauze, sutured to the skin at the corners. This was soon abandoned on account of the pain, while the liability to displacement and soiling of the dressing was not obviated. He now prefers to put nothing on the wound, but to clothe the child in a chemise sterilized in the autoclave. The front and back of the garment are secured between the thighs by a safety-pin, and a second one is inserted at the side if necessary.

This method is specially suitable for such operations as those for hernia, appendicitis, or undescended testicle. The writer disinfects the skin with tincture of iodine, operates in rubber gloves and is particular in securing the most complete hemostasis possible. Accurate coaptation of the wound is obtained by an interrupted suture of silk worm gut. The chief recommendation of the method is

its simplicity. The wound may be examined at any time without disturbing the patient. In managing the action of the bowels or bladder the nurse removes the safety-pin and folds the chemise inwards, so that its internal surface is in contact with itself and afterwards replaces the garment as before.

A NEW METHOD FOR REDUCING SHOULDER DISLOCATIONS

By M. Anglevin, M.D., *La Semaine Med.* Vol. XXXII, 1912

Pointing out the importance which immediate reduction assumes in the treatment of dislocation of the shoulder, the author highly recommends a new method of special value when proper assistance is not to be had at once. The procedure consists in bringing the arm of the affected side over the neck, using the neck as a fulcrum and the forearm as a lever. The hand next the patient is then used for manipulating the head of the humerus in reducing it to its cavity. Anglevin thinks that much valuable time may thus be saved.

EPITHELIOMA OF THE LOWER LIP

By J. Clark Stewart, M.D., Minneapolis, Medical Council, September, 1912

In all cases, no matter how early, small or apparently insignificant, Stewart declares that the following radical operation should be done:

1. Make a continuous incision from one angle of the lower jaw to the other, cutting the skin and platysma only.
2. Dissect down the flap so outlined to the level of the thyroid cartilage.
3. Dissect free all loose tissue and lymph nodes from this space in one piece up to the line of the first incision.

4. Remove the submaxillary salivary glands with their adherent lymph nodes.

5. Suture the incision, draining the angles by small rubber tubes.

6. Remove the epithelioma by a suitably shaped incision, not reaching into the neck, thus shutting off the mouth from the area first dissected.

7. Enlarge the mouth, if needed, by lateral incisions, reaching to the mucous membrane only, the latter being cut higher, to provide a lining to the new lip.

8. Suture the wound in the lip by silk worm-gut and horse hair sutures.

STERILIZATION OF SMALL INSTRUMENTS

Editorial Note, *New York Medical Journal*,
September 21, 1912

Tretrop, of Antwerp, reported recently to the Société belge d'otologie, de rhinologie, et de laryngologie, according to *Presse Medicale* for September 4, 1912, that he had found upon bacteriological research that a boiling mixture of opodeldoc with an equal quantity of water, sterilized almost instantly the small instruments used by laryngologists and specialists along similar lines, without attacking the edge. Staphylococci, streptococci, pneumococci, and bacilli pyocyaneus et coli are unable to resist the solution. Opodeldoc, we need scarcely say, is the linimentum saponatocamphoratum of the National Formulary.

BOOK REVIEWS

PRINCIPLES OF HYGIENE

The New (4th) edition, for students, physicians, and health officers. By D. H. Bergey, M.D., First Assistant, Laboratory of Hygiene and Assistant Professor of Bacteriology, University of Pennsylvania. Fourth edition thoroughly revised. Octavo of 529 pages, illustrated. W. B. Saunders Company, Philadelphia and London. 1912. Cloth, \$3.00 net.

This book has been written with the idea of furnishing a knowledge of the

basic principles of hygiene, to aid students in architecture in comprehending the sanitary requirements in ventilation, heating, water supply and sewage disposal and to be of signal service to health officers in their detail work.

Now that preventive medicine is in the ascendency, this work would seem invaluable, the chapters on air, ventilation, heating, water supply, sewage disposal, food and dieting, hygiene—(personal, industrial and school)—are so fully dealt with that they should be common knowledge to all physicians. Vital causes of disease, disinfection, quarantine and vital statistics are not overlooked.

The subject matter is well arranged, numerous diagrams and drawings and tables make the text clear.

The fifty-six pages devoted to foods are of exceptional value; in fact, you will find the entire book a mine of useful and practical knowledge.

MUSCLE SPASM AND DEGENERATION IN INTRATHORACIC INFLAMMATIONS

Their importance as diagnostic aids and their influence in producing and altering the well established physical signs. Also a consideration of their part in the causation of changes in the bony thorax, and light touch palpation. The possibility and practicability of delineating normal organs and diagnosing diseased conditions within the chest and abdomen by very light touch.

Francis Marion Pottenger, A.M., M.D., L.L.D., Medical Director of the Pottenger Sanatorium for Diseases of the Lungs and Throat, Monrovia, California. Sixteen illustrations. C. V. Mosby Company, St. Louis. Price, \$2.00.

Frazier says that ipecac will abort typhoid fever. It is given in six successive single daily doses, the first day 30 grains, and each day 5 grains less. It is administered in salol coated capsules, so that it will not act in the stomach and cause vomiting.

LIST OF STATE MEDICAL SOCIETIES

This information is correct to date of going to press, so far as we have been able to obtain it from the various secretaries. Officers or others are requested to notify us of any errors or required changes. For further information concerning any society address the secretary.

SOCIETY	PRESIDENT	SECRETARY	NEXT ANNUAL MEETING
Alabama Medical Assn. of the State of	H. T. Inge, Mobile	J. N. Baker, 602 So. Perry st., Montgomery	Mobile, April 16, 1913.
Arizona Medical Association	Francis F. Shine, Bixbee	John W. Flinn, Prescott	
Arkansas Medical Society	Morgan Smith, Little Rock	C. P. Menivether, 309 S. Tr. Bldg., Little Rock	
Connecticut State Medical Society	John G. Stanton, New London	Walter R. Steiner, 4 Trinity st., Hartford	
California Medical Soc. of the State of	Thos. W. Huntington, San Francisco	Philip M. Jones, Butler Bldg., San Francisco	Pueblo, September 24-26, 1912.
Colorado State Medical Society	Walter A. Jayne, Denver	Melville Jones, Metropolitan Bldg., Denver	Wilmington, Oct. 8, 1912.
Delaware State Medical Society	Frank L. Springer, Newport	G. W. K. Forrest, 901 Jackson st., Wilmington	
Florida Medical Association	Albert H. Freeman, Starke	J. D. Fernandez, Jacksonville	Savannah, April 16, 1913.
Georgia Medical Association of	W. W. Plucher, Warrenton	Wm. C. Lytle, Augusta	
Medical Society of Hawaii	Irwin J. Shepherd, Honolulu	Edmund W. Weis, Ottawa	
Illinois State Medical Society	W. K. Newcomb, Champaign	Chas. N. Combs, Terre Haute	Indianapolis, Sept. 27-28, 1912.
Indiana State Medical Association	William F. Howat, Hammond	V. L. Treynor, Council Bluffs	
Iowa State Medical Society	L. W. Liffing, Davenport	Ed. E. Maxey, Boise	
Idaho State Medical Association	William F. Howat, Pocatello	Chas. S. Huffman, Columbus	Louisville, Oct. 12, 1912.
Kansas Medical Society	John T. Axtell, Newton	Joseph D. McCormack, Bowling Green	Baton Rouge, 1913.
Kentucky State Medical Association	J. G. Carpenter, Stanford	Wilfrid Harghey, 24 W. Main st., Battle Creek	Duluth, August 14-15, 1912.
Louisiana State Medical Society	B. A. Ledbetter, New Orleans	Thos. McDavitt, 210 Lowry Bldg., St. Paul	Vicksburg, 1913.
Michigan State Medical Society	D. Emmett Welsh, Grand Rapids	E. F. Howard, First Nat. Bank Bldg., Vicksburg	
Minnesota State Medical Association	Haldor Sveve, St. Paul	E. J. Goodwin, 3525 Pine st., St. Louis	
Mississippi State Medical Association	S. W. Glass, Dublin	Herbert D. Kistler, Murray Hospital, Butte	
Missouri State Medical Association	Robert H. Goodier, Stoutsville	W. Bean Moulton, 622 Congress st., Portland	
Montana Medical Association	T. G. Witherspoon, Butte	John Rubrah, 1211 Cathedral st., Baltimore	
Maine Medical Association	Stanley P. Warren, Portland	Walter L. Burrage, 282 Newbury st., Boston	
Maryland Medical and Chir. Faculty of	A. C. Harrison, Baltimore	D. E. Sullivan, 7 No. State st., Concord	
Massachusetts Medical Society	Geo. W. Shattuck, Boston	Wisner R. Townsend, 17 West 43d st., New York	Rochester, 1913.
New Hampshire Medical Society	Geo. W. McGregg, Littleton	W. J. Chandler, 65 So. Orange ave., So. Orange	
New York, Med. Soc. of the State of	John F. W. Whitbeck, Rochester	Jos. M. Atkin, 466-468 Brandeis Block, Omaha	
New Jersey Medical Society of	Daniel Strock, Camden	J. S. Bentley, St. John, N. B.	
Nebraska State Medical Association	Andrew D. Nesbit, Tekamah	David A. Stanton, High Point	
New Brunswick Medical Society	C. T. Purdy, Moncton, N. B.	R. E. McBride, Las Cruces	
New Mexico Medical Society	Alfred A. Kent, Lenoir	H. J. Rowe, Casselton	
North Carolina, Med. Soc. of the State of	Robert L. Bradley, Roswell	J. H. J. Upham, 186 E. State st., Columbus	
North Dakota State Medical Association	Clinton E. Spicer, Litchville	M. B. Marcellus, 901-3 Selling Bldg., Portland	
Ohio State Medical Association	Horace Bonner, Dayton	Claude A. Thompson, Muskogee	
Oregon State Medical Association	E. A. Sommer, Portland	F. Arnold Clarkson, 471 College St., Toronto	
Oklahoma State Medical Association	Charles L. Reeder, Tulsa	Cyrus Lee Stevens, Athens	Scranton, Sept. 23-26, 1912.
Ontario Medical Association	Herbert E. Bruce, Toronto	S. A. Welch, 253 Washington st., Providence	
Pennsylvania, Med. Soc. of the State of	James Tyson, Philadelphia	R. D. Alway, 212 Main st., Aberdeen	
Rhode Island Medical Society	Frederick T. Rogers, Providence	Edgar A. Hines, Seneca	Nashville, April 8-10, 1913.
South Dakota State Medical Association	William G. Smith, Sidney	Perry Bromberg, Nashville, 315 Jackson Bldg.	
Tennessee State Medical Association	Chas. M. Rees, Charleston	H. Taylor, W. National Bank Bldg., Fort Worth	Ogden, Oct. 1-2, 1912
Texas, State Medical Association of	J. H. McCracken, Mineral Wells	W. Brown Ewing, Salt Lake City	Montpelier, Oct. 10-11, 1912.
Utah State Medical Association	Robert W. Fisher, Salt Lake City	C. H. Beecher, Burlington	Norfolk, Oct. 22-25, 1912.
Vermont State Medical Society	F. T. Kidder, Woodstock	Paulus A. Irving, Fenwille	
Virginia Medical Society of	Hugh M. Taylor, Richmond	C. H. Thomson, Seattle	
Washington State Medical Association	Leon U. Love, Tacoma	Charles S. Sheldon, 251 Langdon st., Madison	
Wisconsin State Medical Society of	J. M. Dodd, Ashland	A. F. Butt, Davis	
West Virginia State Medical Association	O. O. Henry, Fairmont	W. H. Roberts, Sberidan	Sberidan, September, 1912.
Wyoming State Medical Society	A. O. Hamilton, Thermopolis		

RATES FOR REPRINTS

100.....	\$1.00 per page
200.....	1.25 per page
500.....	1.50 per page
1000.....	2.00 per page

Covers to count as four pages when ordered

The Journal is owned and published by the Association, and all profit goes to make it better. Each member of the Association is financially interested in the Journal to the same extent as every other member, and each member is rightfully anxious for the financial success of the publication.

The greater this financial success, the greater the practical value can be made to the individual member, and hence the greater the value as an advertising medium.

Our advertisers, by their patronage, help to support the Journal, and make its successful publication possible. In return they expect, and rightfully, a fair return for their money. Every dollar spent by a member of the Medical Association of Georgia with advertisers in our Journal, in preference to non-advertisers, is a dollar spent in advancing his own personal advantage, for he has contributed something indirectly to the betterment of his own property.

The Journal cannot exist without the advertisers and their good will.

The advertisers cannot continue in business without the patronage of the medical profession.

The medical man cannot continue in business without the supplies for sale by the advertisers.

The interests of all are identical—the profession must depend upon the manufacturers, etc. The manufacturers, drug houses, etc., must depend upon the more progressive and more successful physicians. The interests of both are best served through the official Medical Journal—the Journal published by the profession in its own best interests, scientifically and ethically.

ADVERTISING RATES

1	Page 1 year.....	\$150.00
$\frac{1}{2}$	" 1 ".....	87.50
$\frac{1}{4}$	" 1 ".....	50.00
$\frac{1}{8}$	" 1 ".....	33.00
$\frac{1}{16}$	" 1 ".....	25.00
1	" 6 months.....	87.50
$\frac{1}{2}$	" 6 ".....	50.00
$\frac{1}{4}$	" 6 ".....	33.00
$\frac{1}{8}$	" 6 ".....	25.00
$\frac{1}{16}$	" 6 ".....	20.00
1	" 3 ".....	50.00
$\frac{1}{2}$	" 3 ".....	33.00
$\frac{1}{4}$	" 3 ".....	15.00
$\frac{1}{8}$	" 3 ".....	10.00
1	" 1 month.....	25.00
$\frac{1}{2}$	" 1 ".....	15.00
$\frac{1}{4}$	" 1 ".....	10.00
$\frac{1}{8}$	" 1 ".....	7.50

These rates do not apply to cover pages, space next to reading matter, or matter requiring to be reset.

Reduction in the Prices of Bacterial Vaccines

The attention of the medical profession is hereby directed to a sweeping reduction in the prices of our Bacterial Vaccines (Bacterins). (See paragraph 2 in the panel below.) No physician need now hesitate to use these high-class, scientific products on the score of price.

TWO BOOKLETS

that should be in the hands of every practitioner of medicine.

1. "Bacterial Vaccines and Tuberculins": A concise review of the essential facts relating to bacterial-vaccine therapy. It contains forty-eight pages of text matter and thirteen full-page engravings in colors. It is a handsome piece of literature and embodies much valuable information.

2. "Physicians' Reference List of Biological Products." This covers Serums, Bacterins and Tuberculins, giving prices (including the new quotations on Bacterial Vaccines), together with a lot of useful therapeutic information in ready-reference form.

ASK FOR THESE PAMPHLETS.
WE SEND THEM FREE, POSTPAID.

PARKE, DAVIS & COMPANY

LABORATORIES: Detroit, Mich., U.S.A.; Walkerville, Ont.; Hounslow, Eng.

BRANCHES: New York, Chicago, St. Louis, Boston, Baltimore, New Orleans, Kansas City, Minneapolis, Seattle, U.S.A.; London, Eng.; Montreal, Que.; Sydney, N.S.W.; St. Petersburg, Russia; Bombay, India; Tokio, Japan; Buenos Aires, Argentina.

The Journal of the Medical Association of Georgia



PUBLISHED MONTHLY UNDER DIRECTION OF THE COUNCIL

Editorial and Business Office—300, 302 and 304 Harison Building.

Subscription Price, \$1.00

Entered as second-class matter, August 4, 1911, at the Post Office at Augusta, Ga., under the Act of March 3, 1879.

Vol. II

AUGUSTA, GA., JANUARY, 1913

No. 9

CONTENTS AND DIGEST

ORIGINAL ARTICLES

Colecystitis as a Complication of Pellagra. By H. F. Harris, M.D., Atlanta	283
Discussion on Dr. Harris' Paper	285
Clinical Manifestations of Uraemia. By Ralston Lattimore, M.D., Savannah	288
Discussion on Dr. Lattimore's Paper	291
Intestinal Obstruction with a Report of Experimental Work. By J. L. Campbell, M.D., Atlanta.....	292
Discussion on Dr. Campbell's Paper	298
So-Called Neurasthenia—Same Factors Causative and Curative. By Hensell Crenshaw, M.D., Atlanta...	299
Discussion on Dr. Crenshaw's Paper	301

EDITORIALS

1913	303
Some New Evidence on the Tobacco Question	304

HISTORY OF MEDICINE

The Medical Profession	305
------------------------------	-----

SELECTED ARTICLES

Insects as Carriers of Infectious Diseases	302
The Truth About the "New Cure for Consumption"	308
Responsibility of the Newspaper	309
Urban and Rural Typhoid Fever	310
Georgia's Troubles	311
New Members Since Last Issue	311

OFFICERS

President.....	W. W. PILCHER, M.D., Warrenton
First Vice-Pres.....	J. W. PALMER, M.D., Ailey
Second Vice-Pres.....	T. H. HALL, M.D., Macon
Sec.-Treas.....	W. C. LYLE, M.D., Augusta

COUNCILORS

First Dist.—	J. Lawton Hiers, M.D.....	Savannah
Second Dist.—	Gordon Chason, M.D.....	Bainbridge
Third Dist.—	V. O. Harvard, M.D.....	Arabi
Fourth Dist.—	C. L. Williams, M.D.....	Columbus
Fifth Dist.—	J. N. Ellis, M.D.....	Atlanta
Sixth Dist.—	J. A. Combs, M.D.....	Locust Grove
Seventh Dist.—	W. P. Harbin, M.D.....	Rome
Eighth Dist.—	I. H. Goss, M.D.....	Athens
Ninth Dist.—	W. B. Hardman, M.D.....	Commerce
Tenth Dist.—	W. J. Cranston, M.D.....	Milledgeville
Eleventh Dist.—	A. G. Little, M.D.....	Valdosta
Twelfth Dist.—	E. T. Coleman, M.D.....	Graymont

VICE-COUNCILORS

First Dist.—	A. J. Mooney, M.D.....	Statesboro
Second Dist.—	C. K. Sharpe, M.D.....	Arlington
Third Dist.—	A. G. Crittenden, M.D.....	Shellman
Fourth Dist.—	T. S. Bailey, M.D.....	Newnan
Fifth Dist.—	F. K. Boland, M.D.....	Atlanta
Sixth Dist.—	R. H. Stovall, M.D.....	Macon
Seventh Dist.—	J. H. Hammond, M.D.....	LaFayette
Eighth Dist.—	E. G. Adams, M.D.....	Greensboro
Ninth Dist.—	J. S. Tankersley, M.D.....	Ellijay
Tenth Dist.—	G. L. Carpenter, M.D.....	Wrens
Eleventh Dist.—	J. G. Tuten, M.D.....	Jesup
Twelfth Dist.—	M. L. Currie, M.D.....	Vidalia

STANDING COMMITTEES**Scientific Work**

E. E. Murphey, M.D., Chairman.....	Augusta
V. H. Bassett, M.D.....	Savannah
W. C. Lyle, M.D., ex-officio.....	Augusta

Medical Defense

M. A. Clark, M.D., Chairman.....	Macon
J. N. Ellis, M.D.....	Atlanta
E. T. Coleman, M.D.....	Graymont
J. G. Dean, M.D.....	Dawson
E. G. Jones, M.D.....	Atlanta

Organization

T. J. McArthur, M.D., Chairman.....	Cordele
G. R. White, M.D.....	Savannah
W. B. Hardman, M.D.....	Commerce

Public Policy and Legislation

J. R. Littleton, M.D., Chairman.....	Augusta
W. L. Champion, M.D.....	Atlanta
C. C. Harrold, M.D.....	Macon
President and Secretary, ex-officio	

Necrology

V. D. Lockhart, M.D., Chairman.....	Maysville
W. B. Emery, M.D.....	Atlanta
S. S. Smith, M.D.....	Athens
M. F. Carson, M.D.....	Griffin
J. M. Hull, M.D.....	Augusta

Arrangements

(Committee to be selected by the Chatham County Society)

Delegates to American Medical Association

W. H. Doughty, M.D.....	Augusta
E. G. Ballenger, M.D. (alternate).....	Atlanta
T. J. Charlton, M.D.....	Savannah
T. R. Wright, M.D. (alternate).....	Augusta

COLLABORATORS**History of Medicine**

J. B. Baird, Sr., M.D.....	Atlanta
L. G. Hardman, M.D.....	Commerce
T. R. Wright, M.D.....	Augusta

Medicine

W. W. Jarrell, M.D.....	Thomasville
Ralston Lattimore, M.D.....	Savannah
Thos. D. Coleman, M.D.....	Augusta

Tuberculosis

C. H. Richardson, M.D.....	Montezuma
J. H. Hammond, M.D.....	LaFayette
T. E. Oertel, M.D.....	Augusta

Pellagra

G. M. Niles, M.D.....	Atlanta
E. M. Green, M.D.....	Milledgeville
N. M. Moore, M.D.....	Augusta

Nervous and Mental Diseases

L. M. Gaines, M.D.....	Atlanta
E. T. Gibbes, M.D.....	Gainesville
W. R. Houston, M.D.....	Augusta

Pediatrics

W. Z. Holliday, M.D.....	Atlanta
M. A. Clark, M.D.....	Macon
W. A. Mulherin, M.D.....	Augusta

Public Health

E. C. Benedict, M.D.....	Athens
H. F. Harris, M.D.....	Atlanta
E. E. Murphey, M.D.....	Augusta

Surgery

W. F. Westmoreland, M.D.....	Atlanta
R. P. Glenn, M.D.....	Columbus
C. W. Crane, M.D.....	Augusta

Orthopedics

H. J. Williams, M.D.....	Macon
Michael Hoke, M.D.....	Atlanta
H. M. Michel, M.D.....	Augusta

Genito-Urinary and Syphilis

J. L. Farmer, M.D.....	Savannah
W. L. Champion, M.D.....	Atlanta
H. W. Shaw, M.D.....	Augusta

Obstetrics

H. McHatton, M.D.....	Macon
R. L. Miller, M.D.....	Waynesboro
A. J. Kilpatrick, M.D.....	Augusta

Gynecology

E. G. Jones, M.D.....	Atlanta
J. R. B. Branch, M.D.....	Macon
W. W. Battey, Jr., M.D.....	Augusta

Eye, Ear, Nose and Throat

F. P. Calhoun, M.D.....	Atlanta
H. H. Martin, M.D.....	Savannah
W. C. Lyle, M.D.....	Augusta

Roentgenology

E. R. Corson, M.D.....	Savannah
J. S. Derr, M.D.....	Atlanta
John C. Wright, M.D.....	Augusta

Anaesthesias

T. J. Collier, M.D.....	Atlanta
Chas. Usher, M.D.....	Savannah
M. S. Levy, M.D.....	Augusta

Laboratories

K. R. Collins, M.D.....	Atlanta
V. H. Bassett, M.D.....	Savannah
Everard Wilcox, M.D.....	Augusta

DISTRICT SOCIETIES

DISTRICT	PRESIDENT	SECRETARY
First	E. T. Coleman.....Graymont	Chas. Usher.....Savannah
Second	Hugo Robinson.....Albany	F. M. Martin.....Shellman
Third	C. A. Greer.....Oglethorpe	M. R. Smith.....Cordele
Fourth	H. J. Goodwin.....Roooville	Homer Boatright.....Carrollton
Fifth	W. D. Travis.....Covington	W. S. Ansley.....Decatur
Sixth	W. J. Little.....Macon	I. H. Adams.....Macon
Seventh	A. B. Greene.....Cartersville	T. Lowry.....Euharlee
Eighth	W. D. Travis.....Covington	E. M. Coleman.....Gainesville
Ninth	V. D. Lockhart.....Maysville	A. D. White.....Augusta
Tenth	J. R. Beall.....Blythe	G. A. Traylor.....Waycross
Eleventh	H. C. Wheelchel.....Douglas	T. J. Carswell.....Summit
Twelfth	J. L. Weddington.....Dublin	C. R. Riner.....

COUNTY SOCIETIES

COUNTY	PRESIDENT	SECRETARY
Baldwin	J. W. Mobley.....Milledgeville	W. F. Tanner.....Milledgeville
Banks	V. D. Lockhart.....Maysville	J. D. Rice.....Homer
Bartow	A. T. Calhoun.....Cartersville	H. E. Felton.....Cartersville
Ben Hill	E. J. Dorminy.....Fitzgerald	L. S. Osborne.....Fitzgerald
Bibb	F. M. Cunningham.....Macon	W. D. Hereford.....Macon
Blue Ridge	J. S. Tankersley.....Ellijay	C. B. Crawford.....Blue Ridge
Brooks	S. S. Galuden.....Quitman	J. S. King.....Quitman
Bullock	D. E. McEachern.....Statesboro	F. F. Floyd.....Statesboro
Burke	C. H. Cox.....Waynesboro	J. M. Byne.....Waynesboro
Butts	B. F. Aiken.....Jenkins	W. H. Steele.....Jackson
Carroll	M. M. Hallum.....Carrollton	R. E. Foster.....Carrollton
Chatham	V. H. Bassett.....Savannah	A. J. Waring.....Savannah
Clarke	A. C. Holliday.....Athens	M. F. Matthews.....Athens
Cobb	W. M. Kemp.....Marietta	W. H. Perkinson.....Marietta
Coffee	C. W. Roberts.....Douglas	Quitman Holton.....Douglas
Colquitt	J. H. Green.....Hartsfield	J. E. Lanier.....Moultrie
Coweta	T. B. Davis.....Newnan	T. S. Bailey.....Newnan
Crisp	A. J. Wheelchel.....Cordele	T. E. Bradley.....Cordele
Decatur	N. L. Spengler.....Donalsonville	Gordon Chason.....Bainbridge
DeKalb	A. R. Watkins.....Chamblee	W. S. Ansley.....Decatur
Dougherty	C. W. Walker.....Albany	Hugo Robinson.....Albany
Elbert	C. E. Earle.....Elberton	L. P. Eberhart.....Elberton
Emanuel	C. R. Riner.....Summit	R. C. Franklin.....Graymont
Floyd	W. R. Mangum.....Rome	W. L. Funkhouser.....Rome
Forsyth	F. G. Moss.....Royston	J. H. Hockenull.....Cumming
Franklin	L. B. Clarke.....Atlanta	B. T. Smith.....Carnesville
Fulton	W. B. Floyd.....Plainville	R. R. Daly.....Atlanta
Gordon	C. O. Copelan.....White Plains	E. O. Shellhorse.....Calhoun
Greene	W. V. Chandler.....Baldwin	E. G. Adams.....Greensboro
Habersham	A. D. White.....Gainesville	R. B. Lamb.....Demorest
Hall	R. C. Wiley.....Sparta	E. T. Gibbs.....Gainesville
Hancock	L. Landers.....Commerce	J. A. Brown.....Sparta
Jackson	F. S. Belcher.....Monticello	J. C. Bennett.....Jefferson
Jasper	J. W. Pilcher.....Stellaville	C. L. Ridley.....Hillsboro
Jefferson	L. J. Belt.....Milen	G. L. Carpenter.....Wrens
Jenkins	J. J. Baston.....Dublin	W. E. Rushing.....Millen
Laurens	A. Griffin.....Valdosta	W. C. Thompson.....Dublin
Lowndes	C. H. Richardson.....Montezuma	J. M. Smith.....Valdosta
Macon	L. E. Roper.....Comer	C. A. Greer.....Oglethorpe
Madison	E. B. Terrell.....Greenville	J. L. Baker.....Carlton
Meriwether	J. F. Lancaster.....Forsyth	P. W. Fitts.....Greenville
Monroe	J. M. Crooke.....Columbus	J. O. Elrod.....Forsyth
Muscogee	Sterling Gibson.....Thomson	G. S. Murray.....Columbus
McDuffie	S. W. Everett.....Almon	B. F. Riley.....Thomson
Newton	J. T. Elder.....Farmington	O. L. Holmes.....Covington
Oconee	J. D. Herrman.....Eastman	W. M. White.....Watkinsville
Ocmulgee	R. A. Mallory.....Concord	J. C. Wall.....Eastman
Pike	C. V. Wood.....Cedartown	M. M. Head.....Zebulon
Putnam	V. H. Taliaferro.....Eatonton	H. M. Hall.....Cedartown
Randolph	E. C. McCurdy.....Shellman	S. A. Clark.....Eatonton
Richmond	T. D. Coleman.....Augusta	F. G. Barfield.....Cuthbert
Spalding	E. R. Anthony.....Griffin	W. C. Kellogg.....Augusta
Stephens	Jeff Davis.....Toccoa	J. M. Thomas.....Griffin
Stewart	R. L. Grier.....Lumpkin	C. L. Ayers.....Toccoa
Taliaferro	J. A. Rhodes.....Crawfordville	M. Walton.....Lumpkin
Terrell	J. T. Arnold.....Parrot	L. R. Brown.....Sharon
Thomas	W. W. Jarrell.....Thomasville	C. T. Kenyon.....Dawson
Tift	W. H. Hendricks.....Tifton	Harry Ainsworth.....Thomasville
Toombs	J. M. Meadows.....Vidalia	L. A. Baker.....Tifton
Tri	H. L. Carroll.....Babcock	T. C. Thompson.....Vidalia
Troup	F. M. Ridley, Jr.....LaGrange	C. K. Sharp.....Arlington
Walker	J. M. Underwood.....Lafayette	John Banks.....LaGrange
Ware	J. C. Rippard.....Waycross	J. H. Hammond.....Lafayette
Warren	G. R. Maner.....Warrenton	T. J. Carswell.....Waycross
Wayne	J. G. Tuten.....Jesup	R. D. Nash.....Norwood
Wilkes	A. W. Simpson.....Washington	E. C. Crummeay.....Jesup
Worth	W. C. Tipton.....Sylvester	O. S. Wood.....Washington
		J. L. Tracy.....Sylvester

Journal of the Medical Association of Georgia

W. C. LYLE, M.D., Editor - Augusta, Georgia

COLECYSTITIS AS A COMPLICATION OF PELLAGRA*

H. F. Harris, M.D., Atlanta

The earliest writers on the pathological anatomy of pellagra noted the fact that the liver often showed alterations, particularly in the later stages of the disease. Thus we find in the writings of the elder Strambio that he encountered in his post-mortems not uncommonly alterations in this organ. He mentions that in one instance he found the surface of the viscus covered by nodules, and in another that the organ was pale, both on its outer surface and in its interior. Somewhat later Morelli very strongly insisted on the importance of lesions of the liver in this disease, asserting that out of thirty-seven autopsies he found in thirty-one instances alterations which could be detected with the naked eye. He mentions that the organ was most often larger than normal, while in rare cases its consistence was somewhat augmented; more frequently the liver was unnaturally soft and friable. The color he found usually decidedly altered, being commonly much yellower than normal. He mentions four instances in which, in addition to the discoloration mentioned, the organ was small and hard, with the acini whitish-yellow and enlarged. He alone of all the writers examined even refers to the gall bladder, mentioning only that this viscus was usually filled with a pale yellow liquid without concretions. At a later time Chiarugi found the alteration which is known as "nutmeg liver" in nine cases out of twenty-nine autopsies. In his great work on pellagra Lombroso says: "In thirty-nine cases the organ was found smaller in eighteen, eight being cases of the so-called brown atrophy; thirteen times, on the other hand, the organ was

enlarged; twenty-seven times the viscus was voluminous, yellow, and easily torn; the weight of the liver was generally decidedly diminished, five times almost a half of the normal. In two instances it was about normal in this particular, while in three cases it was overweight. In fourteen instances out of twenty-nine fatty infiltration of the periphery of the acini was found, with congestion of their central portions eight times. The liver cells were free from fat, or filled up with pigment granules. It is noteworthy that Verga found cirrhosis in one instance.

In more recent years but little attention has been directed to this organ, since with the discovery by Tonnini in 1883 of the overshadowing lesions of the central nervous system there has been little disposition to make careful and accurate examinations of the trunk viscera. This statement I feel applies particularly to myself; in the comparatively small post-mortem experience I have had with this disease—for I became aware in the very beginning of my work of the extraordinary alterations found by others in the brain and cord—I was so much interested in them that I must confess, with a feeling of some humiliation, that I did not pay the attention to the other organs which they undoubtedly deserved. Not that I would for a moment assert, for, indeed, I do not believe, that the latter are of anything like so much importance as the changes in the central nervous system, but still I now feel that at least a certain number of symptoms which many cases of pellagra present have their origin in the digestive tube or its adnexa.

In a study of the older writers on pellagra my attention was early directed to the frequent mention of a foul tongue and dyspeptic disturbances in the earlier stages of the disease, and with continued study I became convinced that we have a very large population in which symptoms of this kind occur from year to year,

*Read at meeting of Medical Association of Georgia, Augusta, April, 1912.

particularly in the spring and warmer months, to be followed after an indefinite period by the frank manifestations of pellagra only in some instances, while in other cases the unfortunate victims linger on through a miserable career of nervous dyspepsia, hypochondriasis, and pseudo-hysteria, until their unhappy days are terminated by some other malady. In observing cases of this kind I discovered a number in whom these symptoms persisted despite all treatment, and particularly was I embarrassed by the fact that no amount of rest, dieting, and medication directed toward the stomach has the slightest effect in clearing their tongues, and but little in relieving the manifestations from which they suffered.

In the autumn of the year 1910 a young lady was brought to my office by her brother, who was a physician, who gave the following history:

Miss W., age 34, a Georgian; family history negative. For a number of years she suffered from indigestion in the summer, combined with constipation. The patient had always eaten maize products daily.

About Christmas, 1909, she began to have indigestion badly, accompanied by gas and fullness of the stomach, which gradually grew worse. In February the patient had a severe attack of pain in the abdomen, accompanied by nausea and fever. She continued to go down hill, and about June took to her bed, and has remained practically an invalid since. Appetite is poor, bowels constipated. Has lost 25 pounds. The patient was thin, but did not appear sick, tongue very badly coated, pulse, respiration, and temperature normal; blood haemoglobin 90, white cells 10,200, red cells 3,870,000. On a number of occasions later the white cells were found to be from 10,000 to 18,200 per cu. mm. Feces normal, contained no blood or eggs of parasites. Urine was normal, with the exception of an excess of albumin. Analysis of stomach contents showed a decrease in total acidity and hydrochloric acid, the latter being practically absent as a rule. Examination shows nothing abnormal except that there is an ill-defined feeling of fullness in the right iliac fossa, there being tenderness in the same area.

Knee-jerks increased. The case was diagnosed as one of mild maize poisoning, with possible chronic appendicitis. The patient having remained in a hospital for some weeks without improvement, it was finally decided to remove the appendix, the operation being done by Dr. F. W. McRae; the patient quickly recovered. Microscopic examination of the appendix showed it to be normal.

Some three months later the patient returned, still complaining of the old symptoms, there being, however, now some tenderness in the region of the gall bladder. The patient gradually grew worse, and finally it was decided that possibly there might be some trouble of the gall bladder, and accordingly the abdomen was again opened by Dr. McRae and the viscous drained. Notwithstanding the fact that the patient during convalescence developed typical skin symptoms of pellagra on the hands and elbows, along with some stomatitis, she made a rapid and uneventful recovery from the operation. The tongue began to clear almost immediately after drainage of the gall bladder was instituted, and the constipation was greatly benefited. The patient returned home after the usual period, and since that time, so I learned, has been in excellent health.

A small section of the gall bladder was removed at the time of the operation, and was subsequently examined microscopically. This examination showed a most pronounced inflammatory condition of the mucosa, with swelling and desquamation of its epithelial covering, and collections of lymphoid and plasma cells in the submucosa.

The evident inflammatory condition of this patient's gall bladder, combined with the rapid improvement and clearing off of the tongue on drainage, and the rapid recovery of the patient, suggested to me the possibility that the foul tongue so often observed in the earlier stages of pellagra, was but an outward expression of a catarrhal condition of the alimentary tube, kept up by catarrh of the gall bladder, and probably of the ducts of the liver, and possibly those of the pancreas. Since this time I have seen three other cases which were operated on under practically sim-

ilar circumstances, and in all three there was a remarkable temporary amelioration of symptoms and clearing off of the tongue and relief of constipation. In one of these cases only was a microscopical examination made of a portion of the gall bladder, and this showed in addition to the changes mentioned in the first instance great swelling of the entire tissues, of the viscus, and with even greater destruction of its epithelial coating. I present a drawing of a microscopic section under the microscope, which I think shows these lesions very well indeed. In one of these cases it was not so certain that there was a pellagrous element, the patient having been at one time a hard drinker, and presenting none of the classical symptoms of pellagra even in its earlier stages, except extreme nervousness and a most pitiful condition of hypochondria. In this case the tongue cleared off at once, which I think showed that its condition had some relationship with the gall bladder trouble which was evident. Unfortunately a section removed for microscopic examination was lost. In the remaining case I have heard nothing of the patient since a short time after her operation, and I do not know the subsequent history.

The point to which I wish to call attention in this paper is that we often find symptoms of nervous indigestion and a subacute catarrh, with coated tongue and foul breath in the early cases of pellagra, and that there appears to be a relationship between this condition and catarrh of the gall bladder. It is noteworthy that this catarrhal condition, unlike those encountered from other causes, seems in no way to be affected by washing the stomach out with nitrate of silver, or alkaline and salt solutions, nor is the digestion benefited by these measures. The results would also indicate that hypochondria, which is always associated with digestive disturbances, and usually with a foul tongue, may be likewise due to catarrhal changes in the gall bladder, whether the original condition producing it be a maize poisoning or some other. This would seem to open up a field for investigation both for the surgeon and the pathologist as well as for the general clinician, and might

possibly lead to interesting and important developments. As to whether or not the operation of drainage is likely to result in cure in any considerable proportion of cases I cannot say, but it seems not impossible that this is still another field of medicine which is destined to be taken from the general practitioner by the surgeon.

DISCUSSION ON DR. HARRIS' PAPER

Dr. E. C. Thrash, Atlanta, said that many doctors and the laity seemed to be thrown into a state of hysteria in regard to pellagra because they could not cure it. They could come as near curing as they could typhoid fever, measles, pneumonia, or in fact almost any acute febrile disease. They should become more practical and less panic-stricken in this work and then they could, without doubt, accomplish much good. Dr. Thrash has lived in the country where he could see how the corn products were handled and, therefore, he felt that he knew something about them. There was no doubt but that pellagra would be rife in the country until a food commission was established who would most carefully inspect the maize products. This was in fact the point that he wished to make and call serious attention to. Carloads after carloads of corn would be shipped into a small town. The merchant would inspect the corn carefully, and finding it damp, blue and moldy, would reject it because he did not believe it was fit to feed to his horses or to sell to his customers for horse feed. This carload of grain being refused, would be shipped back to the original owner who, by the way, did not destroy that carload of corn; far from it. He dried it out, prepared it for grinding, converted it into meal, shipped it back to this same merchant who refused the grain, saying that it was not fit even to feed his stock or to sell to his customers. The grain that he refused, he said was not fit for use for animals, but should be emptied into the river or destroyed in some manner. Yet this merchant accepted the meal and used it in his own family, the meal made from the corn that he said was not fit even to feed his

horses. It was very seldom that a load of bad, moldy corn was destroyed; it was dried and then ground up into meal.

Dr. Thrash said he was very much interested in Dr. Harris' paper. He had performed four post-mortems on patients who had died of pellagra and had made very careful microscopical examinations of some of the tissues. He found in one instance a marked albuminous degeneration and cloudy swelling of the kidneys, and the same condition existed in the liver cells, a condition simulating yellow atrophy. There were present the same degenerative changes in a mild form that occurred in yellow atrophy. When they got to the bottom of the pathology which took place in pellagra, they would recognize the fact that the same changes take place in the other parenchymatous cells of the body as in the cerebral cells. The first changes noted in the brain cells was a cloudy swelling probably due to some toxic condition. The cloudy swelling was really due to, or the result of, some toxemia. It might result from some chemie poison, just as it does in acute infections from metabolic products of bacteria. This weakened the cells, produced cloudy swelling and later vacuolation and fatty degeneration. The cell structures were weakened in this manner in these cases, in the exposed surface of the body (malpighian layer of the skin), and as the X-ray destroys weakened cells in cases of cancer, so an actinic action of the sun's rays on the cells of the epidermis produces the dermatitis which characterizes pellagra, and gives it its name. This condition being brought about by the weakened poisoned cells, not being able to withstand these irritating rays.

Dr. R. M. Harbin, Rome, said that Dr. Harris had brought up the question of cholecystitis and its relation to pellagra, and it was known that many who did much surgery were apt to operate on cases that were thought to be due to a disease with focal symptoms, but which were in fact pellagrous in nature. The most typical symptoms of pellagra were to be found belonging to the nervous system, but there were other symptoms. He reported two

cases of surgical interest; in neither of these was pellagra diagnosed at the time of operation.

Case 1. This patient was a very neurotic woman; she had a retroversion of the uterus, a procidentia, lacerated perineum and a train of nervous symptoms. The laceration was repaired, the round ligaments were shortened and her appendix was removed. The pellagrous symptoms went on to the development of those of a typical nature along with her neurotic symptoms. The mistake in this case was in supposing that her neurotic symptoms arose from her pelvic lesions when in fact they arose from her pellagra.

Case 2. This woman had an ovarian cyst; she also had a very low grade of dermatitis. The removal of the cyst made no impression upon the disease although she made a good recovery from the operation. Some few months later she died from typical pellagra.

Dr. Geo. C. Mizell, Atlanta, said in regard to Dr. Huston's suggestion that pellagra is confined to hot climates, it may be that pellagra has no such climatic limitation; it had occurred in the Western Hemisphere from Buffalo, N. Y., to Brazil and Argentina, and in the Eastern Hemisphere from Poland to South Africa. There did seem to be a limit at the isothermal line of 70° F. for July on the north and at the same isothermal line for January on the south.

With regard to treatment which had been mentioned, he said that therapeutic agnostics had made the situation difficult for those who undertook treatment. For the benefit of these patients he wished to tell those present that he believed it could be cured. He had taken in hand patients who had been pronounced hopelessly incurable, and these patients were today in splendid health. One patient in the hands of another physician had a recurrence every summer for four years. He did not expect to have another attack. He did not expect to have recurrences in a single case he treated. Give these patients treatment and ask them how they felt; leave off treatment and ask them how they felt, and

they would answer you, telling you how much better they felt under treatment.

This was a disease that did considerable damage, but because certain cells in the spinal cord and brain were destroyed, and because there remained disturbances of the stomach, bowels and gall bladder, this was not an indication that the patient still had pellagra. These conditions were the result of but not dependent upon the pellagrous process.

With regard to the pathology of pellagra, he had seen instances of cholecystitis in a number of cases. What part of the body would pellagra not affect? It would even affect the bones, finger nails and hair.

Dr. Jas. N. Ellis, Atlanta, said he was much impressed with Dr. Harris' paper. It had been his experience to treat two patients and operate upon them for cholecystitis without any suspicion that they had pellagra at the time. Subsequently, during convalescence in the hospital, he found the typical symptoms of the disease. The cases were unmistakably chronic cholecystitis, complicating pellagra. What permanent influence, if any, the drainage of the gall bladder has upon pellagra he does not know, but there was decided temporary improvement in both cases.

Dr. J. W. Palmer, Ailey, speaking of the etiology of pellagra and the corn theory as the cause, said that he had had three cases in one family, the mother, a son about eight or nine years of age, and a grandchild about one year of age. These three cases occurring in the same family were reported to Dr. Harris, thinking that he might wish to see and investigate them, but Dr. Harris wrote that he did not have the time to see them. If they accepted the damaged corn theory in seeking for the cause of pellagra, how could the essayist or others explain the existence of the disease, pellagra, in patients who did not eat maize or corn?

Dr. E. Bates Block, Atlanta, said he had seen several cases of cholecystitis associated with pellagra, and he attributed it to the general mucous membrane involvement in cases of pellagra. In pellagra there was a decided tendency to attack

all mucous membranes. He was, however, more particularly interested in the nervous symptoms of pellagra; the majority of those that he had seen showed manic—depressive insanity or dementia precox.

The symptoms of pellagra, or far as the skin lesions were concerned, were of cerebral distribution; they did not follow the line of the blood vessels, lymphatics, nor the sensory nerves in their distribution, but the lesions did follow the distribution of the sympathetic system; these skin lesions were definitely referable to the distribution of the sympathetic nervous system.

The effect of sun light might be a factor, but it was not the chief factor in the production of these eruptions, because the eruption was seen upon the covered parts, such as the shoulder, the arms and the legs, parts that were not exposed to sun light.

Dr. H. F. Harris, Atlanta, said that in the paper read by Dr. Mizell reference was made to some experiments which were carried out for the purpose of determining the cause of pellagra. For one or two years he had been going carefully over the literature of pellagra published by the Italians. He took a great deal of pains in reading over the long drawn out papers on this subject. Absolutely nothing was done, not even by Lombroso, to indicate definitely and scientifically that corn and the corn products were the causes of pellagra. The experiments were made on animals or on people and extended over a very short period of time. A number of experiments Lombroso made were on human beings who received but one dose of the extract of bad maize. On the other hand other experimenters who were very able men had gone into this subject carefully and thoroughly and have gotten contradictory results. There was absolutely nothing from the experimental side as yet that would show the disease, pellagra, to be induced by bad maize. On the first of October, Dr. Harris began feeding six dogs on the products of bad corn. Up to date two had died with symptoms very suggestive of pellagra, loss of weight, emaciation, etc. What changes occurred

in the cord he did not know. The other animals were rapidly failing in the same way the two dogs did, and undoubtedly from their present appearance, they would survive but a short time. If he was able to find definite and characteristic changes in the spinal cord, it would be first instance where one had really proven that the bad corn had produced pellagra.

With regard to the remarks made about cases of pellagra occurring where bad maize was excluded, it should be remembered that many of the corn products could be taken without the knowledge of the recipient: it would be very difficult to determine that any person had not partaken of any of the corn products in the past. There was no doubt in his mind but that the changes of the nervous system that occurred in pellagra were permanent, and were not influenced by medication of any sort. The best one could do was to give tonics and build the patient up. If pellagrins are built up they might go on for years without exhibiting symptoms. When any depressing influences were brought to bear upon them, relapses would occur. Drugs or anything else had no specific action on the disease; the best Italian observers believe that there is no question about this. As in the treatment of tuberculosis, emphasis should be laid upon the value of the dietetic and rest treatment. It had not been mentioned that the disease might be caused by some of the products of distillation, as it has been shown that in Roumania the disease was caused by the drinking of corn whiskey. No one knows the actual poison of the disease; the poisons that had been isolated by Lombroso amount to nothing.

CLINICAL MANIFESTATIONS OF URAEMIA*

(From a Diagnostic Viewpoint)

Ralston Lattimore, M.D., Savannah

The word uraemia does not signify urea but urine in the blood. It is difficult to decide which in the urine are products of metabolism and which are toxic agents.

In some cases the onset of uraemia coincides with a diminution of urea in the urine and an increase in the blood. On the other hand we have the negative series of blood examinations in which no excess of urea was present in the blood, and in which the urine contained either a normal amount, or less of urea.

The salts of potass have been looked on as the essential poison. It has been proven experimentally that the salts of potass are toxic, but other important substances are likewise at fault.

The object of this paper is not to describe acute uraemia, with which we are all so well acquainted, but to touch upon from a diagnostic viewpoint, the minor symptoms which are more or less chronic in character and often overlooked; some of which always precede the more advanced Brightism.

Almost every disease of the nervous system may be simulated by uraemia, but the cerebral symptoms are the most interesting.

Cerebral Uraemia

I have in mind a man who for years was spoken of as crazy. At the same time he complained more or less of headaches, and especially cryaesthesia, an intense sensitiveness to cold—his mental condition gradually grew worse. Urine showed no especial changes except low specific gravity, eye grounds were in a condition of advanced neuro-retinitis, slight facial paralysis left side of face, and an almost classic clinical picture of a tumor of the brain. Autopsy showed small contracted kidneys and a wet brain.

This man had for years suffered a chronic form of Bright's disease; the correct diagnosis was not made and consequently no attempt to correct or retard the nephritis.

Uraemic paralysis of various kinds such as haemaphlegia, monoplegia, facial paralysis, are not infrequently seen, and partial paralysis of the third and seventh nerves are sometimes due to chronic uraemia.

Now, what causes these manifestations of paralysis? In some cases the paralysis is due to focal lesions in the brain, as

*Read at meeting of Medical Association of Georgia, Augusta, April, 1912.

hemorrhage and softening of the cerebral arteries. Changes in the cerebral vessels being frequent in the course of chronic nephritis, but some of the fatal and curable cases are not due to the above mentioned lesions. These are due to an intoxication or oedema, of a definite cerebral origin.

Cerebral oedema with or without effusion into the ventricle is found in a fair number of post-mortems, renal lesions always being present. Nevertheless, sufferers have succumbed to paralysis, and post mortem examinations showed no focal lesions, and no aedema of the brain.

It is probable the paralysis is of a toxic origin, like the paralysis due to lead poisoning, etc. But it is hard to explain how the general uraemic poisoning may cause partial paralysis and haemaphlegia. We are reduced to theories. I recall a patient, with a four-months-old baby, who came under my care in one of the wards of the sanitarium. She was twenty-eight years old, anaemic and in a generally run-down condition. On admission she was perfectly rational and gave a complete history of herself to Dr. Chas. Usher—the next day she was completely aphasiac with a right side haemaphlegia. I saw her with Dr. Usher and made a diagnosis of uraemic haemaphlegia; the urine was found loaded with albumen; the patient was conscious at the time, but died in a few days from an increasing uraemia.

Gastro-Intestinal Uraemia

We have all seen, not infrequently, cases of gastro-intestinal uraemia. In these cases the digestive organs try to assist in the elimination of the urea, and the urea passes through the mucosae of the stomach and intestines. Bernard has proved this by ligating the ureters in animals. The most extreme manifestations of this condition are in chronic intestinal nephritis, but more commonly in chronic diffuse nephritis with exudation.

Cardio Renal Uraemia

Attacks are characterized by a tendency to collapse and pain resembling angina pectoris. I have a patient who occasion-

ally gets up a condition of this kind and who is relieved by giving attention to his kidney trouble. Why in some cases the mischief spends itself on one organ I don't know; it is impossible to explain the reason for this selection.

I find that cases of chronic nephritis are peculiarly subject to inflammation of the pulmonary organs. The paroxysmal type may often be mistaken for true asthma, and the mode of onset may be identical; this is very important to remember for upon a rational diagnosis depends the relief of the patient.

Respiratory troubles of uraemic origin are not uncommon, and medical literature furnishes much evidence of ambulatory cases of Cheyne-Stokes respiration.

The breath in all of the cases of uraemia has a very pronounced and characteristic ammoniacal odor, on account of the urea which has been converted into carbonate of ammonia. I have frequently noticed the odor even in some of the milder cases.

Clinically, we often distinguish the moist and dry forms of uraemia. The former is due to the retention of chlorides, the latter to the retention of urea.

If in the course of a Bright's disease the kidneys do not eliminate the chlorides, the excess retained in the body does not remain long in the blood, but passes into the tissue, and as salt is a hygroscopic substance, it takes up water from the tissue and chloruraemia is the result, characterized by oedema, single or multiple. Superficial deformities obtain, or, if deep seated, it leads to visceral disorders, which affect the lungs and the brain and reveal themselves in nervous and respiratory troubles.

When the free discharge of urea is not affected by the kidneys, the urea does not pass back suddenly, as the chlorides do in the tissue, but accumulates in the blood. This does not give rise to oedema, but dry uraemia.

Thus we have forms of both moist and dry uraemia. Either form may exist alone, but this is exceptional. In most cases we find the retention of both substances.

The diagnosis of chronic interstitial nephritis is first often made by the occu-

list, who discovers evidence of neuro-retinitis.

Along the line of functional diagnosis of kidney trouble, Rountree and Gerahty, of Johns Hopkins' University, have recorded some remarkable clinical work.

In the Archives of Medicine, March 15, 1912, they record, in detail, the most interesting work they are doing with phenosulphonephthalein, or phthalein, this is a bright red crystalline powder, soluble in water and alcohol, and readily soluble in the presence of alkalies. This drug is non-toxic and non-irritant locally, and is excreted practically entirely by the kidneys and with extraordinary rapidity appearing in the urine, normally, within a few minutes after injection. In alkaline solutions it presents a brilliant red color, which is ideally adapted for quantitative colorimetric estimation. The test is a practical and comparatively simple one and is made as follows: One c. c. of a carefully prepared solution of phthalein, 6 milligrams to c. c. is injected into the gluteal or lumbar muscles. Twenty minutes to a half hour before administering this test, the patient's bladder is emptied and 200 to 400 c. c. of water is given, in order to insure free urinary secretion, otherwise delayed time of appearance may be due to lack of secretion. A sterile catheter is put into the bladder, or the patient requested to pass a small amount of urine frequently, the former is the better method, a specimen of urine is measured and the sp. gr. taken. Sufficient sodium hydroxid (25 per cent.) is added to make the urine decidedly alkaline in order to elicit the maximum color. The color displayed in the acid urine is yellow or orange, and this immediately gives place to a brilliant purple red color when the solution becomes alkaline. The urine solution is now placed in a liter measuring glass and distilled water added to accurately make one liter. A portion is then taken to compare with a standard solution which is used for all estimations. With an appropriate colorimeter the quantitative per cent. estimation of the phthalein can easily and accurately be made. Normal kidneys secrete the greater amount of dye injected in two hours. Moderately dis-

eased kidneys secrete within two hours, say about fifty per cent. of what normal kidneys secrete. One hour or at most two hours observation are recommended.

The clinical observation of Rountree and Gerahty are extremely interesting and instructive as a diagnostic aid. For instance in acute nephritis, a case is cited as follows: A boy, aged 8, typical acute nephritis, severe grade, prognosis considered unfavorable. Phthalein output on admission, 11 per cent. for two hours. Four days later phthalein output for two hours, 28.4 per cent. Clinical condition much better. Two weeks later nephritis practically cleared up. Phthalein excretion increased to 68.8 per cent. for two hours.

Here is a splendid interesting observation in a case of chronic parenchymatous nephritis: Female, aged 28 years. Headaches, oedema of face, marked anaemia, nausea, and occasional vomiting, mental condition clear, general weakness. Urine contained a large amount of albumen and numerous casts. Output of urine small. Phthalein test given. No trace of phthalein could be detected in urine during next three hours. She gradually became more uraemic, nausea and vomiting became continuous, although mentally clear. Death occurred within four days.

The following is a striking example of the helpfulness of the phthalein test in diagnostic and prognostic agent in a case of chronic intestinal nephritis: Mrs. O., aged 47; six months ago noted fatigue and dysnoea on slight exertion together with slight oedema of lower extremities. Two months later nausea and vomiting developed and have been present almost constantly since. Patient poorly nourished, anaemic, urine pale yellow, sp. g. 1011, alb. trace, no casts found on repeated examination. Blood pressure 135, eye grounds negative, phthalein test showed no output in three hours. Although nauseated, the patient was mentally bright and seemed in no imminent danger. Two days later the patient became irrational, dying in forty-eight hours in uraemic convulsions.

An attempt has been made to differentiate, by means of phthalein test between

these cardiac cases with broken compensation with passive congestion of the kidneys, associated with presence of albumen and casts in the urine, and in those cases in which the cardiac insufficiency is associated with varying grades of true nephritis.

The following case illustrates the differential diagnosis made between a cardiac and cardiorenal case by the phthalein test: H. B., aged 29, complains of severe dyspnoea and some swelling of feet, which had existed for two weeks only. Physical examination showed increased cardiac dullness, mitral and aortic insufficiency, dilation of heart, some ascites and bronchopneumonia, blood pressure 190, urine high-colored, sp. gravity 1043 acid, large quantity of albumen, large number of hyaline and granular casts. Phthalein tests showed an output of 26 per cent. for two hours. Patient died day following admission. Autopsy showed chronic aortic and mitral, endocarditis, chronic myocarditis and dilatation and hypertrophy of heart. A moderate grade of chronic diffuse nephritis, with some superimposed acute nephritis. Death in this instance was due largely to cardiac failure.

The findings of Rountree and Gerahty as regards nephritis and blood pressure have been as follows: In the majority of cases of chronic nephritis, in which the blood pressure has been high, the phthalein elimination has been markedly decreased, but no exact parallelism exists, inasmuch as a few instances have been encountered in which the blood pressure has been over 200 m. m. hg., and the phthalein output has been one-half of normal; on the other hand there have been instances in which the blood pressure has been normal while the phthalein output has been zero or nearly so, the patient shortly afterwards dying in uraemia.

Their conclusion is, a high blood pressure, when taken into consideration with other clinical symptoms, is valuable from a diagnostic and prognostic viewpoint. Yet many patients die of renal insufficiency and exhibit a normal or a practically normal blood pressure.

In a word, the key to the whole situation is not what passes through the kid-

neys, but what does not pass. It is not because the kidneys allow some albumen to pass, every day there is danger, but in the fact that the diseased kidneys do not allow the elements of depuration to pass in proper quantity. They may accumulate rapidly and the major symptoms of uraemia appear and if slowly we have minor uraemia.

The terms albuminuria and Bright's disease are not synonymous. As a matter of fact it is not always in the cases with the most marked albuminuria that we find major troubles. The albuminuria sometimes disappear at the gravest moment, and on the other hand, it may persist in spite of the apparent cure of Bright's disease.

Many people who suffer from albuminuria have not Bright's disease, and in certain cases of Bright's disease albuminuria may not be present at times.

The conclusion seems to be that uraemia is not defined as we formerly thought by the per cent. estimation of 24-hour urea output, because the potass salts and other products are also responsible for the so-called toxic condition. Also that blood pressure is not necessarily high in minor and major uraemia.

The reports of Rountree and Gerahty show that we have in phthalein a valuable help as a clinical diagnostic aid.

DISCUSSION ON DR. LATTIMORE'S PAPER

Dr. Dunbar Roy, Atlanta, spoke of the eye symptoms, the early symptoms that often appeared in kidney troubles. Within three months he had had three cases and they came to him only because of a diminution in vision and without any reference to the kidneys or the urine at all. In one of the individuals he found the typical condition, an albuminuric retinitis, but there was absolutely no constitutional symptoms of the trouble at all. The patient had never consulted a physician before and he had no idea whatever of what was the matter with his kidneys. This led the doctor to a very important point, where there was a dimness of vision, with symptoms of blindness, when these pa-

tients insisted upon going to an oculist or consulting an ophthalmologist, having glasses fitted because of this diminution in vision, they should look into the eyes and see what the ophthalmoscope revealed. The doctor said that he had seen case after case that if taken in the early stage and recognized would have been, or might have been, cured, had they not been fitted with glasses. Another symptom of importance in the diagnosis of these cases was the dilatation of the pupils, and he reported five cases that came to him with symptoms very peculiar to this condition; in one pupil the condition seemed to be normal but the other was dilated; the former acted better to light and accommodation than the pupil that was dilated. In looking into the eye he could find nothing that was abnormal in the background, but he had a suspicion that there might be some toxæmic condition present to account for the symptoms presented. This patient was sent to the family physician, who found some symptoms of a toxæmia. These clinical points were of interest and he believed that every general practitioner should place more confidence in what was found from an examination by an oculist or ophthalmologist.

Dr. Ralston Lattimore, Savannah, in closing the discussion, reported the case of a patient, twenty-two (22) years of age, who came to him in consultation because of a serious condition which he thought he was in; he appeared in splendid health. The doctor who attended him stated that he was a victim of advanced Bright's disease, but the patient did not feel at all sick. He applied for insurance, and was turned down flat. Dr. Lattimore looked the man over carefully, but could find nothing abnormal in his physical condition. Blood pressure found to be 120. The urine contained an enormous amount of albumen, something like fifty per cent. (50%) by volume. Under the microscope the urine showed a great many red blood cells, epithelial cells, hyaline and granular casts; urea output was small. Here was a man that, in spite of all found, did not feel sick at all. I shall note phthalein

output in this case when he returns to Savannah.

Dr. Lattimore has had other cases in which the condition was practically the same as in the case just reported. In some of these cases the condition clears up, the urine becoming practically normal.

INTESTINAL OBSTRUCTION WITH REPORT OF EXPERIMENTAL WORK*

J. L. Campbell, M.D., Atlanta

Owing to the mortality incident to this condition, it may well be classed as one of the gravest of surgical problems.

In this paper it is my purpose to review briefly—

- I. The etiology, pathology and clinical symptoms as found in the human subject.
- II. Treatment and report of cases.
- III. Experimental pathology.

I

Stoppage of the fecal current may be due—

- (1) To closure of the canal by mechanical means.
- (2) To paralysis or paresis of the intestinal muscles.

1. Mechanical obstruction may be divided into two classes (a) Obstruction with strangulation; (b) Obstruction by obturation.

(a) In this class, according to statistics gathered by Gibson¹ strangulated hernia causes 35 per cent. of all cases; intussusception and adhesions cause each 19 per cent.; volvulus causes 12 per cent.; the remaining cases are divided among various causes.

Strangulated hernia may occur at any age; the smaller the hernia the greater the danger. There is very little pathology connected with strangulated hernia that differs from other forms of intestinal obstruction, except that the gut shows the pressure rings at the points of strangulation.

*Read at meeting of Medical Association of Georgia, Augusta, April, 1912.

REFERENCE

¹ Quoted from Johnson's Surgical Diagnoses, Vol. II.

tion; the sac is usually oedematous and contains a quantity of bloody serum.

Occasionally the gut may slip into some of the fossae on the posterior abdominal wall or into the foramen of Winslow or through a rent in some of the mesenteries or a tear in the diaphragm and become strangulated.

Intussusception is more frequent in children than in adults; 68 per cent. of the cases occurring in the first decade. It is the result of relaxation of the intestinal wall at some point with increased peristalsis above. It usually takes place at the ileo-caecal junction but may occur at any part of the canal. The pathology peculiar to this condition is an invagination of one part of the intestine into another at one or more places. The writer remembers a case seen in the dissecting room where there were twenty or more points of invagination.

Obstruction by adhesions is the result of previous attacks of peritonitis or trauma during operations. Appendicitis and appendiceal abscesses are responsible for the greatest number of cases in this class. The extremity of a Meckels diverticulum may adhere to an adjoining portion of the mesentery or gut in such a manner that an opening will be left beneath, and the loop of intestine forced through it becomes strangulated. This is, perhaps, the most frequent cause of obstruction where there is no history of a previous operation or peritonitis.

Late post operative obstruction is the result of adhesions. Early post operative obstruction may be due to rapidly formed adhesions or paralysis of the intestine. Statistics collected from many sources show that from 1.10 to 1.6 per cent. of all abdominal operations are followed by obstruction. Obstruction by adhesive bands most frequently takes place in the lower part of the small intestine.

Volvulus may occur in any part of the intestinal canal, but is more frequent in the colon. In a series of 121 cases reported by Gibson¹, 73 were in the large intestine; 58 of this number were at the sigmoid. Volvulus takes place in two ways (1) a mass of intestine rotates on its mesentery, (2) the gut rotates on its own axis. There

is no definite explanation that will account for either of these conditions; the former is supposed to be due to violent peristalsis where there is a long mesentery; while the latter may be due to adhesive bands.

In considering the pathology of obstruction with strangulation we observe the strangulated portion, the proximal and distal gut and the general peritoneal cavity.

The appearance of a loop of strangulated gut is the same whether it be in a hernial sac or in the peritoneal cavity. It is purple or black, depending on the time the strangulation has existed. It is soft and flabby if the blood has been completely excluded, or thickened and more or less brawny, if only partly so. These changes are more rapid if there has been a complete occlusion of the veins only, than if both arteries and veins are obstructed. The walls of the gut contain many bacteria. There is seldom any lymph on the surface of the strangulated loop. There may be an attempt by nature to wall off the loop if it is short, consequently it is sometimes surrounded by omentum. If, however, the loop is long the destructive changes may be so rapid that nature will have no chance to make a defence.

The gut above the obstruction will be distended and filled with gas and fluid. This fluid varies in color from light straw flaked with green to a dark brown or black; and is filled with bacteria varying in virulency according to the length of time the strangulation has existed and the amount of constipation that was present before the obstruction took place.

The gut below will be empty and flabby or contracted owing to the patients general condition.

In one case in which I made a post mortem the whole intestine below the obstruction was matted together with adhesions around an appendiceal abscess.

The peritoneal cavity will contain more or less blood stained fluid according to the length of the strangulated loop and the time that it has existed. A general peritonitis may or may not be present. There is most frequently only a local peritonitis with adhesive lymph along the lines of demarcation between the healthy and stran-

gulated gut; or in cases of virulent infection there will be only a dark bloody fluid or pus loose in the cavity. The mesenteric lymph glands will be enlarged if the condition has existed for any length of time.

(b) Obstruction by obturation is the result of a foreign body such as a gallstone, impacted feces, etc., lodged within the canal; an organic stricture, a growth, malignant or benign, pressing on the gut from without, or rarely bands of adhesion crossing the gut in such a manner that it constricts the caliber without interfering with its blood supply to any extent.

The pathology in this condition is similar, so far as the proximal and distal gut is concerned, to that just described. Where the condition has been partial for a time before becoming complete, the walls of the proximal gut will be greatly thickened as well as dilated; distally it will be contracted and brawny as well as empty. There will be less peritonitis and that generally limited to the point of obstruction. However, as in one case on which I operated when an organic structure was accompanied by general peritonitis.

Paralysis or paresis of the intestines; the so-called dynamic or adynamic obstruction—stoppage of the fecal current without an actual closure of the lumen of the gut—may be due to some cause acting on the cerebro-spinal or sympathetic centers; as toxins, causing the sudden stoppage and acute dilation of the gastro-intestinal canal in pneumonia, typhoid fever, and other acute toxic and febrile diseases. Reflexes conveyed to the intestines through the splanchnic nerves; Murphy and Cannon² have shown that there is a temporary stoppage of the fecal current when the testicles or ovaries of healthy cats are crushed even though the cats are anaesthetized, provided the splanchnic nerves are intact: but no effect is produced when these nerves are cut. Acute obstruction may follow injuries of the chest, where the trauma is applied in the neighborhood of the splanchnic nerve³.

Paralysis may also be due to local injury to the intestinal wall acting through the plexuses of Auerbach or Meissner. Again

referring to the experiments of Murphy and Cannon², who have shown that trauma produces the same effect on the intestines of cats whether or not the splanchnics are intact. Rough handling of the intestines during operation is generally followed by some of the well-marked symptoms of obstruction; namely, distension, nausea, and vomiting, which is very probably due to the local trauma.

A brief resume of the most important symptoms is as follows:

Pain, severe and paroxysmal in character; at first general over the whole abdomen; later becoming localized at the point of obstruction. It is claimed that the pain will be relieved by pressure if peritonitis does not exist.

Vomiting is persistent and distressing in most cases. At first the stomach contents are expelled, then the contents of the upper intestines, stained with bile, later the vomitus becomes dark brown or black and finally fecal in character. Intervals between the vomiting may be made more miserable by hiccoughs.

Constipation is an early and persistent symptom. The contents of the lower bowel may be expelled or washed out by an enema, but there will seldom be any voluntary passage of either gas or feces except where the strangulation is high up.

The facial expression is typical. There is a distressed look as if appealing for help: the eyes are sunken and surrounded by dark rings. The fingers are cold and the nails blue. The whole body may be bathed in cold perspiration. The pulse is weak, thready and rapid; the temperature is sub-normal or only a slight rise.

The severity of these symptoms will depend on the location and the amount of gut involved. The lower portion of the canal contains more virulent bacteria than the upper, therefore the symptoms will be more severe where a long piece of the lower intestine is strangulated.

The symptoms in obstruction by obturation are of a more chronic nature and will continue for a much longer period with less prostration than where strangulation exists.

The symptoms of paralytic obstruction are very similar to those enumerated above

² Jour. A. M. A., September 7, 1907, p. 840.

³ J. E. Adams Annals of Surgery, Vol. LI, No. 1.

though possibly a little more severe, and the patient frequently has considerable fever.

II

As soon as the diagnosis can be established, which seems from my own experience and the experience of others is most likely to be mistaken for "acute indigestion", an operation is indicated. A free incision should be made through the abdominal wall over the area most likely, from the symptoms present to be involved. A search must be made for the point of strangulation and when found the adhesions, if any exist, must be carefully broken up and the strangulated gut drawn out of the abdominal cavity and carefully examined. Much care and individual judgment must be exercised in each case; remembering that if the loop of intestine is long and contains much fecal matter that can furnish virulent bacteria, greater care should be exercised in allowing it to remain than if it is short, for the system may not be able to withstand the dose of poisons thrust upon it by allowing the blood current to sweep through the bacteria-laden walls of the strangulated gut. Crile has shown that animals die sooner if, after strangulating a portion of the intestine, the blood current is re-established. He also states that they die even if the strangulated gut is resected; proving that the organism is poisoned by the washed out toxins⁴. Therefore, we should handle any strangulated loop carefully so that the toxins will not be squeezed out before determining whether or not it is to be removed. If there is any doubt, and especially if the loop is long, **remove it**.

Mr. Treves long ago found that it was very essential to empty as much fluid as possible from the distended proximal gut. This has been emphasized by Dr. Murphy and a splendid method is suggested by Monks⁵. If the abdominal cavity is dry, as in cases of adynamic paralysis, I believe that in addition to emptying the canal, should it be distended, filling the abdominal cavity with hot normal saline solution will greatly benefit the patient.

The operation must be done with the utmost dispatch that thorough work will allow; be sure that all adhesions are broken up. Much of the success depends on this step, also remember that a volvulus may complicate a strangulated or incarcerated hernia as pointed out by R. T. Miller⁶; for this may be the cause of death in a case that at first seemed hopeful.

The after treatment is of great importance. The patient's stomach should be washed until the fluid returns clear; if hiccoughs or vomiting continues, this should be repeated as often as necessary. Put the patient in the Fowler position as early as reaction is well established and give saline enemata containing coffee and some form of nourishment at intervals of six to ten hours. In paralytic obstruction, eserine in 1-50 grain doses every three hours is of some benefit.

Report of Cases

I have recently operated on fourteen cases of intestinal obstruction with two deaths. These cases may be arranged in four classes:

Class I.—Strangulated hernias, 3 cases, two males, both inguinal hernia. One female, femoral hernia.

Case No. 1: Hernia strangulated 24

⁶ R. L. Miller, *Annals of Surgery*, Vol. LIII, No. 2. Obstruction by Gallstones. F. B. Land, *Annals of Surgery*, Vol. LIV, No. 3.

Acute Intussusception of the Ileum with Volvulus. C. J. Scudder, *Annals of Surgery*, Vol. LI, No. 2.

Studies in the Surgical Anatomy of the Small Intestine. Monks, *Annals of Surgery*, October, 1905.

Abdominal Pain. K. G. Lennander, *Jour. A. M. A.*, September 7, 1907.

Symptoms and Diagnosis of Strangulation of the Intestine. J. B. Roberts, *Jour. A. M. A.*, September 7, 1907.

Paralytic Ileus. C. H. McKenna, *Jour. A. M. A.*, April 17, 1909.

Post Operative Intestinal Obstruction. C. C. Frederick, *Jour. A. M. A.*, October 12, 1907.

Prevention and Treatment of Post Operative Intestinal Obstruction. D. H. Craig, *Jour. A. M. A.*, October 12, 1907.

Successful Treatment of Acute Post Operative Ileus. F. D. Donoghue, *Jour. A. M. A.*, October 12, 1907.

Post Operative Ileus. W. H. Wathen, *Jour. A. M. A.*, June 5, 1909.

Dynamic Ileus. J. C. Monroe, *Jour. A. M. A.*, September 7, 1907.

Resection for Relief of Intestinal Obstruction. W. J. Mayo, *Jour. A. M. A.*, September 7, 1907.

Experimental Study in Intestinal Obstruction. R. D. McClure, *Jour. A. M. A.*, September 21, 1907.

Post Operative Ileus. Frank Martin, *Jour. A. M. A.*, September 21, 1907.

Intussusception Complicating Typhoid Fever. O. C. Smith, *Annals of Surgery*, Vol. XLIX, No. 1.

Sensibility of the Alimentary Canal. A. F. Hertz, Oxford University Press, New York.

Dacostas Text Book Surgery.

Fowler's Surgery.

⁴ Jas. G. Munford, Mass. General Hospital Publication, Vol. III, No. 3, p. 540.

⁵ Monks, *Annals of Surgery*, June, 1908.

hours. Large sacs with long loop of intestine. Symptoms grave.

Nos. 2 and 3: Small sacs, short loop, hernia strangulated six and five days, respectively. Symptoms mild. All recovered.

Class II.—Post operative obstruction, 4 cases, 1 male, 3 females.

No. 1: Male, age 35, appendiceal abscess. Obstruction occurred one month after operation. Symptoms lasted 36 hours; patient's condition grave. Recovered.

No. 2: Female, age 30, ovarian cyst and salpingitis. Obstruction occurred four and one-half months after operation. Symptoms lasted 72 hours, moderate severity. Recovered.

No. 3: Female, age 36, hemorrhoids and shortening of round ligaments. Obstruction occurred one month after operation. Symptoms lasted 20 hours. Patient's condition grave. Intestines greatly distended, contents had to be emptied before the abdominal cavity could be closed. She made a slow recovery.

No. 4: Female, age 54, gallstone. Obstruction occurred one and one-half months after operation. Symptoms lasted 72 hours. A little more than moderate severity. Patient had chronic Brights, but made a slow recovery.

Class III.—Obstruction complicating acute abdominal lesions; 6 cases, 4 males, 2 females.

No. 1: Male, age 18, acute appendicitis of two days' duration: no history of bowel movement. Recovered.

No. 2: Female, age 30, acute appendicitis of four days' duration. Diarrhoea stopped 10 hours previous to operation. Recovered.

No. 3: Male, age 50, chronic appendicitis, acute attack, 9 hours' duration. Recovered.

No. 4: Female, age 56, suppurating dermoid cyst of ovary. Intestinal obstruction. Symptoms lasted for a period of six days. Slow recovery.

No. 5: Male, age 30, appendiceal abscess and intestinal obstruction; symptoms lasted for a period of five days. Died. Post mortem showed about 9-10 of small

intestine and ascending colon matted together by adhesions around a number of small abscesses, one occupying a point just below the splenic flexure of colon. Upper part of small intestine about four or four and one-half inches in diameter.

No. 6: Male, age 50, general peritonitis with intestinal obstruction. Duration of symptoms 4 days. Syphilitic history. Died.

Class IV.—Paralysis of the whole intestinal canal, without distension. Paralytic obstruction, 1 case, female, age 30. Dysentery with vomiting for ten days. No bowel movement after admission to hospital, except small amount washed out by enemata during first day. Vomited almost constantly for several days. Abdomen was flat and no peristalsis could be heard except over the pylorus. Pregnancy was excluded both by history and examination. Heart sounds normal, but weak. Pulse, though not rapid, could scarcely be felt at wrist.

Operation: Incision made in median line from ensiform cartilage to umbilicus with local anaesthetics—20 M. 1% quinine urea solution was injected beneath the fascia. The same amount of a 1% solution of novacaine was injected into the fat and a 1% solution of cocaine into the skin, immediately before beginning. There was some pain when the fascia was cut and she complained of "stomach ache" when the parietal peritoneum was grasped with the forceps.

The cavity was dry, the intestines and stomach empty and flabby. There were ten or twelve areas of intestine varying in length from 2 to 10 inches that were dark purple in color. The duodeno-jejunal angle was located and the intestine examined throughout its entire length. There was no pain except where the mesentery was stretched. The color returned to all of the dark spots, except two, which were very dark, but as the wall seemed firm, I decided not to resect them. The abdomen was filled with hot saline and closed. The patient made an uneventful recovery, without vomiting again.

The number of cases in this series is not sufficient to be of any statistical value, but

the individual study of one or two of them will be instructive. Case 3 in Class II, seems quite unusual. While taking the stitches in the round ligaments, I held the uterus with a double tenaculum, which made only a single puncture on the posterior surface, yet a band which had stretched one-half inch between the uterus and the intestine formed an arch beneath which a loop of gut several inches long was caught and became strangulated. Cases 1, 2 and 3, in Class III, should teach us to explore the abdomen if there is any doubt of the appendix being the whole cause of the trouble. In No. 1 the appendix was not at fault, there being a rupture of the colon, probably a diverticulum, two inches above the caecum. The obstruction in all three cases was recent but distinct and would have been overlooked had I not made a long incision.

III

The experiments from which the material for this paper was secured were made since January 23 of this year. Nine dogs and one cat were used for the work.

In Nos. 1, 2, 4 and 5 the arteries and veins to six inches of the small intestines were ligated and the intestines returned to the abdominal cavity, the wound closed and dressed. The most careful aseptic technique was used in each case.

No. 1 died in about 22 hours. The gut had been strangulated 18 inches below the stomach. There was a small amount of thick bloody exudate in the abdominal cavity and the gut to which the blood had been excluded had completely disintegrated.

No. 2, same operation except the vessels ligated were about 18 inches above the ileo-caecal junction.

The dog was alive and apparently well seven days later. January 31, at 1.30 p. m., he was again etherized and the abdomen opened, the cavity was clean, but a mass of adherent intestines were found surrounded by omentum. It was excised and the dog allowed to bleed to death. On examination it was found that the intestines had so adhered around the strangulated portion of the gut, which was gangrenous, that a new canal was made and

the bowels were performing their normal function. The highest temperature, 100.4-5, was recorded on the second day.

No. 4, same operation except the vessels to 3 inches of the intestines, 15 inches above the ileo-caecal junction, and a single vessel 4 inches above the junction were ligated. Five days later the dog was well and playful. It was again anesthetized and the abdomen opened. Pathology similar to No. 2 was found except the mass was not so large. It was excised, the mesenteric vessels ligated and a side to side anastomosis made; there was only a slight adhesion where the lowest ligation was made. The dog died 15 hours later. No post mortem. The temperature ranged from normal to 101.2-5.

No. 5. Vessels to 6 inches of gut 18 inches below the pylorus were ligated; 24 hours later the dog had a temperature of 102, but was able to walk about the room and attempted to play. It was again anesthetized and the abdomen opened. The gut was swollen purple and surrounded by adherent omentum. A loop of intestine was loosely attached to its side, but there were no other adhesions. The dog was killed.

No. 6. The vessels to 6 inches of the ileum were ligated and a cord tied around the intestines at the lower end of the strangulated area. The dog died 40 hours later. The abdominal cavity was filled with a dark bloody exudate, the strangulated portion of the gut was entirely gangrenous. Some attempt was made to wall off the lesion by adhesions, but the destructive process was too rapid.

No. 7. Six c. c. of the exudate from the abdomen of No. 6 was injected intermuscularly into the abdominal wall of a small puppy. It died 15 hours later. The stomach was distended, the intestines slightly so, and were entirely empty. The dog had vomited some before its death. The peritoneal cavity was dry, but the peritoneum and omentum were blood-stained.

No. 8. Six-months-old dog was given 6 c. c. of the exudate from the abdomen of No. 6. It and a well dog were each fed 1 ounce of ground beef and 75 grains of bismuth. A series of radiographs were then made by Dr. John S. Derr, which

showed increased peritonitis in the dog, which had been given the toxine.

The dog died 15 hours after receiving the toxine. The post mortem showed pathology similar to No. 7.

No. 9. Operation similar to No. 6. Dog lived 4 days. At the post mortem the exudate was collected in pipettes and turned over to Drs. Could and Bunce of the Atlanta Chemical Laboratory, who report as follows:

Dear Dr. Campbell—The following is only a very brief preliminary report on fluid from abdominal cavity of dog:

Bacteriologic Examination: Colon bacilli present. Possibly other bacteria cocci present. Possibly other bacteria present which have not been isolated yet.

Chemical Examination: Albumin present in large amount. Sugar present, a trace. Indol present, a strong reaction for indican.

As you see this is only a very brief report and, therefore, is not of the value it would be if more complete. I will complete it at the earliest possible time.

ALLEN H. BUNCE.

I wish to thank Messrs. Keene and Ward and other students of the Atlanta School of Medicine for their painstaking assistance in the above operations. Mr. Keene was untiring in his efforts in keeping the temperature and other records.

DISCUSSION ON DR. CAMPBELL'S PAPER

Dr. E. G. Jones, Atlanta, said that a recent experience led him to report one cause of intestinal obstruction that had not been referred directly to, one caused by a mesenteric cyst. These cysts might be divided into embryonic, hydatid and malignant collections of fluid. There were reported probably less than 214 cases of cysts of the mesentery of any kind, and less than 50 of embryonic cysts of the mesentery, and probably less than one-half a dozen dermoid cysts of the mesentery, with a few reported cases of dermoids of the meso-colon. Chylous cysts were explained, with reference to their

origin, in two ways; they might be the result of dilatation of the lymphatic lacteals in the mesentery, or they might result from a collection of serous fluid, into which lacteals have ruptured. Embryonic cysts in the mesentery were supposed to originate usually in Wolffian sequestrations. His own case, the mesentery of the transverse colon and of the upper ascending colon, enclosed a cyst composed of four lobes containing clear serous fluid, the whole mass being as big as a person's head. Also there was found a small dermoid containing about one drachm of hair and other contents usual to such a cyst. In cases of cysts of the mesentery of the transverse colon, the situation would be beset with more than the usual difficulties, such as an abnormal condition of the gall-bladder. One should endeavor to enucleate these four lobes without seriously injuring the blood supply to the intestines, and this was the ideal treatment if it could be accomplished.

Dr. Floyd W. McRae, Atlanta, said that in dealing with any acute obstruction of the bowel not only did many mistake the dynamic, but also the adynamic ileus. Dr. Murphy had shown that seventy per cent. (70%) of the cases where they were primarily thought to be an acute mechanical obstruction of the bowel, were either dynamic or adynamic ileus. In their dealing with acute mechanical obstruction they should remember that they were dealing with a condition that was surgical, first, last and all the time. Good results could only be obtained by an early diagnosis and prompt surgical intervention. Dr. McRae believed that if they wiped away from the surgical literature the late symptoms and signs that were given as occurring in acute mechanical obstructions of the bowel, they would be doing the profession a great service. When the abdomen was distended, when there was fever, when there was stercoraceous vomiting, one was certain of having to deal with a mechanical obstruction of two to four days' standing, and it meant that with or without surgery, the gut would die; a strangulation of the bowel, with its nerve and blood supply cut off for that length

of time meant death. He hoped they would remember those facts.

Trauma was something to be avoided as much as possible in all abdominal operations, and this was of the things that was being more and more appreciated; the delicate handling of the abdominal contents was of the greatest importance; rough handling led to untimely ends and untoward results. In dealing with these obstructions they should deal promptly and heroically, but they should remember this epigrammatic statement: "Get into the abdomen quickly, but get out quicker".

Dr. J. L. Campbell, Atlanta, said that rough handling of the intestines had caused more post-operative trouble than any other one factor. In abdominal operations one should carefully wall off the intestines from the field of operation, and handle the intestines as little as possible. Occasionally they would meet a place so tied up by adhesions that more handling of the intestines was necessary; at the same time they should remember that the more the intestines were handled, the more trouble would follow, at least for a few days. In the experiments performed by Dr. Cannon where he stripped the intestines between the fingers, he found that the bismuth paste passed more slowly. This would follow whether the splanchnics were intact or not.

The work that he had been doing since January 23, 1912, furnished him material for the paper he had just read.

SO-CALLED NEURASTHENIA — SOME FACTORS CAUSATIVE AND CURATIVE*

Hansell Crenshaw, M.D., Atlanta.

Neurologist to the Hospital for Nervous Diseases;
Neurologist to the Moore Memorial Free
Clinic and Dispensary; Professor of
Physiology in the Southern
College of Pharmacy.

Probably most cases of so-called neurasthenia are merely expressions on the part of the nervous system of the action of some irritant or strain; and thought-

ful physicians will agree that it is our duty to search diligently for sources of irritation or strain before classifying any such case as a purely functional neurosis.

The careful clinician will study each neurasthenic patient literally from the crown of the head to the soles of the feet. Indeed, in the writer's experience it is well to begin with the head and proceed downward looking first for evidences of cranial injuries and anomalies; second, for eye strain or irritation; third, for auditory disturbances; fourth, for respiratory obstructions including adenoids; fifth, for cardiac lesions and other thoracic abnormalities; sixth, for alimentary disorders including intestinal parasites in the adult; seventh, for ptosis of abdominal and pelvic organs; eighth, for hemorrhoids; ninth, for kidney conditions; tenth, for genito-urinary abnormalities including adherent prepuce, contracted meatus, lacerated perineum and lacerated cervix; eleventh, for orthopedic anomalies, not omitting the sacro-iliac synchondrosis and flat-foot. Even the nails and toes should come in for a careful scrutiny as possible points of irritation.

After having studied the supposed neurasthenic patient according to the foregoing regional sequence, it is my practice to look next for psychic strains or irritants. For example, emotional strain, the strain of overwork, the strain of domestic infelicity and the strain of routine existence—a strain be it said which may account for the remarkable percentage of neurasthenies recruited from lonely rural districts. And, then, that ever-present strain which few if any of us escape, the strain financial.

Now and then, however, a competent study of the neurasthenic individual fails absolutely to disclose any present source of irritation or strain whatever. In such cases it is our duty to look into the history of the patient for some shock or crisis sufficient to have unstrung the neurons. Thus may we encounter traumatic neurasthenia. Also habits as to caffeine, tobacco and sexual matters must be investigated.

Failing even here, however, to find an extrinsic cause of the nervous exhaustion

*Read at meeting of Medical Association of Georgia, Augusta, April, 1912.

and irritation of our patient. we are forced to conclude that the trouble is not due to the action of an irritant or strain, and that we are dealing with neurasthenia proper. The writer has under observation at this time one such patient—a patient whose pupils have been dilated, whose scrotum has been curtailed, whose corpuscles have been counted, whose adenoids have been removed, whose meatus has been cut and whose stomach has been set in order, yet who managed to run this remedial gamut without the loss of a single phobia or the sacrifice of so much as one pet ill.

Accordingly, there must be another factor in the causation of neurasthenia besides the element of irritation or strain. This other factor is nervous instability. Probably nervous instability is chiefly inherited, not a few individuals coming into the world handicapped, as Osler so aptly says, by lack of nerve capital. And it is a curious though well-known fact that a given nervous disorder in the parent may reappear in the offspring as a totally different neurosis. Thus chronic alcoholism may reappear as epilepsy, epilepsy as dipsomania, and almost any disturbance of the nervous system in the parent may manifest itself in the child as neurasthenia.

The question of whether or not any truly functional nervous diseases exist is too large to be debated here. But the trend of modern neurological thought seems to be against the functional hypothesis and appears to point to the belief that nervous exhaustion and instability is accompanied by organic changes in the neurons, possibly as a result of impaired or improper nutrition. Be this as it may, the factor of instability in some proportion is ever present in these cases. And while this condition of disturbed equilibrium of the nervous mechanism is oftenest inherited, it may be also acquired; for continual reaction to an unsuitable environment may eventually destroy the balance of an originally stable set of neurons.

Thus each case of so-called neurasthenia may be attributable to two causative fac-

tors: (1) irritation, and (2) nervous instability. Oftentimes the first of these factors is greatly in the ascendancy, the constitutional instability being slight or entirely wanting. In other cases the second factor is chiefly responsible, and the patient is subject to little if any irritation or strain beyond that incident to ordinary living. In still other cases the two factors may be about evenly balanced, the patient suffering from a moderate degree of inherited instability of the nervous system and at the same time laboring under considerable irritation or psychic stress.

The well-known symptoms of neurasthenia, such as undue susceptibility to fatigue, phobias, and imaginary somatic ills I will not dwell upon here, but there is one symptom which to my mind has been somewhat neglected in the literature. I refer to the blood-pressure findings in neurasthenia. While we are told that there is a high-blood pressure type of neurasthenia, the writer's experience leads him to suspect that the overwhelming majority of cases of nervous exhaustion present abnormally low blood-pressure. It would seem that the blood-pressure curve is a very fair index to the progress of the patient, for the closer this curve approximates the normal mean of 130 millimeters (systolic), the more nearly normal becomes the patient's general condition. When the pressure is high, the patient feels better; and when the pressure is low, the patient feels worse.

Obviously the rational treatment of these cases is to remove any irritation or strain which may be responsible for the patient's loss of nervous vigor and equilibrium. Thus, properly fitted glasses have relieved many cases, and the removal of a forty-foot tape-worm, in a case reported to the writer by Dr. George M. Niles of Atlanta, absolutely relieved a pronounced condition of neurasthenia and brought the patient to a state of health and happiness, where in the words of Dr. Niles, "the last figment of nervousness was removed leaving of apprehension not a rack behind."

After the factor of irritation or strain has been excluded or removed, the element of constitutional nervous instability re-

mains to be considered. Oftentimes the patient's heredity is sufficiently good to make recovery possible so soon as relief from reflex irritation has been obtained. In most cases, however, some attention must be given to the other factor, the factor of instability.

The writer's experience with drugs such as the old-fashioned anti-spasmodics, the more modern glyceo-phosphates and the very modern cacodylate of soda has been discouragingly negative. On the other hand, the use of agents for regulation of blood pressure has been encouraging. The agents used have been pituitrin, adrenalin chloride and digitalis. The digitalis appeared to be more positive and permanent than the adrenalin, while the pituitrin was found least effective. It is remarkable how resistant to medication low-blood-pressure often is. The writer has administered ten minims of 1 to 1000 adrenalin three times a day without producing appreciable raise of blood-pressure, although the sphygmomanometer was applied one hour after each dose. Nevertheless the epinephrin or adrenalin is a most valuable agent for the increase of blood-pressure and should be given trial in every case.

More effective than any drug, however, in these cases of constitutional or acquired nervous instability is the rest treatment as formulated a quarter of a century ago by that distinguished member of our profession, S. Weir Mitchell. Oftentimes nothing short of six weeks strict rest treatment in a suitable institution will suffice to lighten or remove from the victim of this neurosis his burden of misery. After all nature is the great physician, and our best chance of enlisting her unerring aid is to remove the racked and shrinking neurasthenic from the conflict of a life where survival of the fittest is the unrelenting rule, and to place him instead in the soothing, simple environment of a sanitarium where he may rest and sleep and regain control of his shattered neurons.

1027 Candler Building.

DISCUSSION ON DR. CRENSHAW'S PAPER

Dr. Lewis M. Gaines, Atlanta, said that Dr. Crenshaw's views coincided with his own observation and experience. It was unfortunate that there was such a term as neurasthenia; but today the term neurasthenia was the only one the use of which would make this group of conditions at all intelligible.

There were three things in particular Dr. Gaines wished to discuss and they were as follows:

First: The necessity of a thorough physical examination, beginning at the top and going to the bottom. If one did not proceed in an orderly way, one could not expect to make anything tangible out of one's findings.

Second: A matter which should be thoroughly emphasized and much stress laid upon it, that sexual affairs caused very many cases of neurasthenia. Freud of Vienna advocated the idea that this sexual depression, and frequently the patients themselves were unaware of it, caused a great many cases of neurasthenia, and particularly hysteria. This sexual factor was most difficult to demonstrate, and the patients frequently were unable to tell anything about it. Much had been accomplished in this line by an analysis of dreams and they promised to be one of the most important methods to be had for the unravelling of these obscure cases—the analysis of these dreams which represented a subconscious influence of an irritant which was not present when the patient was conscious. Certain things could only be revealed through dreams.

Third: It was always his belief that the use of adrenalin by the mouth had no effect upon the blood pressure; it was also his belief that adrenalin given by way of the stomach was so altered by the digestive juices that it produced no effect whatever. But if adrenalin was injected intravenously or subcutaneously it would give rise to a temporary increased blood pressure. When given by the mouth he did not believe that there would be any rise whatever in the blood pressure.

Dr. E. Bates Block, Atlanta, said that there was a time when everybody who presented fague nervous symptoms were considered to be neurasthenic or hysterical patients. A great deal of the glamour of neurasthenia had been taken away by the introduction of the term psychasthenia with a train of mental symptoms which formerly were spoken of under the term neurasthenia. These patients were more properly designated as psycasthenics.

So far as neurasthenia was concerned, most cases could readily be demonstrated as being due to either abdominal or sexual disorders. He had seen cases of duodenal ulcer supposed to be cases of neurasthenia, as well as cases of dilated stomach, floating kidney, falling of the abdominal viscera, ptosis, sexual disorders, cases of prostatitis, sexual excesses and all sorts of sexual mal-practices. The cure of these cases depended upon the proper understanding of the cause or causes; it was mainly by a study of the abdominal organs, as well as the sexual organs, and the habits of the patient that they were enabled to remedy what was wrong.

Dr. Hansell Crenshaw, Atlanta, only wished to state in closing the discussion that he was familiar with Freud's theory as to the genesis of neurasthenia by the repression of desires and unconfessed crimes. Just how much was in this theory, he was as yet unable to state.

With regard to the use of adrenalin, he had used it both hypodermically and by way of the mouth, and he had sometimes been disappointed even when he gave it hypodermically in the effort to raise blood-pressure.

There was a possibility of doing harm with the rest treatment if not properly carried out. It was a dangerous thing simply to place a man in bed for six weeks; he should have proper passive exercise, massage, and so forth as laid down by Mitchell and Dereum if damage was to be avoided.

The more money The Journal of the Medical Association of Georgia makes out of its advertisements the less it costs the State Association to run the paper. This

means that every member of the State Association has an interest in the advertising columns. If one business firm advertises and another does not, patronize the one that does. It is money in your pocket.

INSECTS AS CARRIERS OF INFECTIOUS DISEASES

Scarcely second in importance to bacteria, the primary agents in infectious diseases, are parasites and other insects, the active and often indispensable mediums in the spread of such diseases. This question has not been exhaustively studied, and it is possible that scarcely more than a beginning has been made in determining what insects may act as carriers. Mention need hardly be made of the two species of mosquito, the house-fly, the flea, the tick, etc., as well-known carriers. Surgeon M. F. Gales, of the U. S. Navy, states in a recent bulletin that on shipboard roaches, to which hitherto little attention has been paid as carriers of disease, are responsible, for the spread of typhoid diphtheria, tonsillitis and tuberculosis. If this is possible on board ship it is no less possible in the congested quarters of cities, tenements, rooming-houses and especially hospitals. The experiments of Dr. M. J. Rosenau, of Harvard, recently reported before the International Congress on Hygiene and Demography, says The Journal of the American Medical Association, indicate that infantile paralysis may be carried by the common biting or blood-sucking stable-fly.

Communities must perforce depend largely on medical men and boards of health for the prevention of disease. Therefore medical men and boards of health must know not only what agents may act as carriers, but also what means may be of service in exterminating the pests.

FOR SALE

One Truax-Green Compressed Air tank, set in table; best grade. Price, \$15.00 f. o. b. Augusta.

Address
Journal Medical Association of Georgia.

THE JOURNAL OF THE MEDICAL ASSOCIATION OF GEORGIA.

300-302-304 Harison Bldg.

SUBSCRIPTION

PRICE.....ONE DOLLAR PER YEAR

SINGLE COPIES of this calendar year, 15 cents; of the previous calendar year, also 15 cents; two years old, 20 cents; three years old, 25 cents; in other words, 5 cents additional is charged for each year preceding the last calendar year.

REMITTANCES should be made by check, draft, registered letter, money or express order. **Current** should not be sent unless the letter is registered. Stamps in amounts under one dollar are acceptable.

CHANGE OF ADDRESS notice should give both the old and the new address, and state whether the change is **permanent** or **temporary**. The change notice must reach us **ten days** in advance of the date of the issue which is to be forwarded to the new address.

WARNING: Pay no money to an agent unless he presents a letter showing authority for making collection.

ADVERTISEMENTS

Advertising forms go to press eight days in advance of the date of issue. In sending in copy time must be allowed for setting up advertisements and for sending proofs. No proprietary medicines can be advertised until approved by the Council. Advertising rates will be sent on request.

CONTRIBUTIONS

EXCLUSIVE PUBLICATION: Articles are accepted for publication on condition that they are contributed solely to this journal.

CONTRIBUTIONS TYPEWRITTEN. Authors should have their contributions typewritten—double-space and with ample margin—before submitting them. The expense is small to the author—the satisfaction is great to the editor and printer. We cannot promise to return unused manuscript, but try to do so in every instance. Manuscript should not be rolled or folded.

ILLUSTRATIONS: Half-tones and zinc etchings will be furnished by THE JOURNAL when satisfactory photographs or drawings are supplied by the author. Each illustration, table, etc., should bear the author's name on the back. Photographs should be clear and distinct; drawings should be made in black ink on white paper. While we cannot guarantee to return used photographs and drawings, we use our best endeavors to do so after the article is published, if the word "return" is written on the back of each.

ANONYMOUS CONTRIBUTIONS, whether for publication, for information, or in the way of criticism are consigned to the wastebasket unread.

NEWS: Our readers are requested to send us items of news of a medical nature, also marked copies of local newspapers containing matters of interest to physicians. We shall be glad to know the name of the sender in every instance.

1913

The Journal wishes every reader a Happy and Prosperous New Year. May this year be the best you have ever had. May prosperity wait on you. May your friends be better ones and if you have enemies, may they become friends. May we do more and better work than in the year just ended. May our Association continue to grow, even more rapidly than in the past. May more county societies be organized and new members be added to those already organized. May every old member feel a personal interest in the Association and do a little more work for it.

Do you happen to know that we only need a few more new members to entitle us to another delegate to the American Medical Association? Let us try to secure the requisite number before the Savannah meeting in April, and send three delegates instead of two. Do you happen to know that there is a strong probability that during this year every member of our State Association will be automatically a member of the American Medical Association? Let us have one of the largest memberships in the Southern States when this occurs. The medical profession in Georgia ranks among the brightest and best in the Union, but our membership in State and National organizations is far below the average. This is a condition of affairs that should at once be remedied. Are you willing to do your part? Are you willing to solicit the membership of every doctor in your community who is not a member of his county society? A few hours' work on your part will double our membership. Will you do it, or will you wait for the other fellow to do all the work. The Association in Georgia needs team work, but team work alone will not suffice, for individual work can accomplish effects that nothing else can. Will each member pledge himself to solicit at least one man? Do it as if you were an insurance agent and don't take "no" for an answer. Show him where he can help himself, his brother doctor, his profession, and the public at large. You know his membership will do these things, or you would not yourself be a member, so why not tell your neighbor?

Do you happen to know that the opportunities for organized medicine in Georgia will be greater this year than ever before? A campaign of education has been conducted unceasingly during the past year, and the fruits of the work will mature during 1913. There can be no doubt but that owing to the tireless efforts of the Association, we will have a new Medical Practice Law, adopted during this year, and it will be to the material advantage of every man, woman and child in the State. **Will you help us?** Do you ever think how you might help your County Secretary? Members might mail him a check for dues, and save him a lot of time in calling on

you and perhaps not finding you in, or finding you at a time when it is inconvenient for you to pay. Send him your dues promptly, and with them send an application for membership signed by a brother doctor who is not a member.

In counties where there is no society send your State dues direct to the secretary, or better still get a few of your neighboring doctors together and organize a society. Don't feel that you have to wait for your District Councillor to come and do this work for you. **Do it yourself.** The secretary will do the rest. He has sent report blanks to a number of physicians residing in counties where there is no society, with the request that they organize one. If you happen to be such a member residing in such a county, have you done anything? This is an earnest appeal to you to assist in the work. Lay aside petty spites and animosities; forget your fancied grievances; give your brother credit for having some good in him, even though not as much as you believe you possess yourself, and let us all "get together," and make this the banner year for the Association and for the medical profession of Georgia.

"By their works ye shall know them."

SOME NEW EVIDENCE ON THE TOBACCO QUESTION

The consideration of tobacco and its dangers has heretofore been largely based on the amount of nicotin contained in the smoke. But there are other products of tobacco which must share the responsibility. Among these are carbon monoxid gas, prussic acid, furfural and some others. Although all of these compounds admittedly are poisonous, their danger depends on the quantities in which they are taken. Recently investigations have been made of some of these toxic products, and the results are of considerable interest. The fact that the action of certain kinds of tobacco has been attributed to the prussic acid in their smoke has induced the Wurzburg hygienist, Prof. K. B. Lehmann, to investigate the charge. He has found that the amount of this compound produced depends somewhat on the rate at which the tobacco is smoked. The slower the

current of air through a cigar, the smaller is the amount of prussic acid formed. The entire amount found, however, is too small to account for the effects. So far the burden of the blame for the ill effects of smoking would appear to rest on nicotin. Investigations made by the London Lancet indicate that the ordinary cheap cigaret contains the least nicotin in the smoke and the pipe the most, the cigar occupying an intermediate position. Assuming, then, that nicotin is the essentially injurious substance in tobacco, the cigaret would appear to be the least harmful form, provided that the amount of tobacco consumed was no greater in this form than in others.

The general impression, however, is that cigaret-smoking is the most pernicious form of indulgence in tobacco. This might be accounted for in part by the facts that the form of the cigaret makes it possible for young persons to indulge in it when they would not smoke cigars or pipes, that in older persons it lends itself to overindulgence and that the smoke may be inhaled with less irritation and, therefore, that more of the products may be absorbed into the system. Further investigations indicate that the most injurious forms of smoking are not those in which nicotin prevails but those in which there is a larger proportion of furfural. Furfural is about fifty times as poisonous as ordinary alcohol. There is a probability that the least harmful tobacco will turn out to be that which yields a minimum of furfural in the smoke. Although the amount of nicotin present in the cheaper grades of cigarets is practically negligible, the amount of furfural appears to be sufficient in itself to account for the bad effects attributed to cigaret smoking. The use of tobacco in its various forms is so general that the subject is of almost universal interest. The Journal of the American Medical Association thinks that the smoker is entitled to know the dangers and the safest methods of using tobacco, while educators and all who have anything to do with the young, whether by example or by precept, will appreciate scientific facts with which to back up wise deductions from experience.

HISTORY OF MEDICINE

J. B. BAIRD, Sr., M.D.
Atlanta

T. R. WRIGHT, M.D.
Augusta

L. G. HARDMAN, M.D.
Commerce

THE MEDICAL PROFESSION

Abstracted Address by Dr. David Starr Jordan,
Pres. Leland Stanford University.

Medical research is now on the firing line of the advance of science. It has left behind it as outworn garments all medical theories, and all schools of medicine. The medical advance is the work of no school, the offspring of no preconceived theory.

One of my early students, on graduating in medicine, was asked to what school he belonged. His answer was, "I have nothing to do with schools. I am trying to practice medicine." Just as soon as men seriously try to practice medicine, schools of medicine cease to exist. These belong to the metaphysics of the dark ages, when men, in default of science, tried to practice philosophy.

At the most, or at the best, a school indicates merely a preference for one mode of therapeutics over another, or over all others, a matter of very minor importance as compared with knowing the nature of the ailment in question and of the causes which brought it about. Accuracy of scientific knowledge is fatal to the pre-arranged theory of treatment of disease, the basis of any school of theoretical medicine. Accuracy of knowledge goes beyond symptoms or surface indications. It is with symptoms and symptoms only, in default of knowledge that varying schools of medical pherapeutics become possible. When we know the actual conditions which give rise to symptoms, all methods must rest on these conditions.

All art is based on science. Science is human experience tested and set in order. Art is knowledge in action. An art is not based on knowledge becomes a mystery or a trade. The practice of medicine through the ages has been one or the other or both.

It is a trade when the physician apprentice follows his master about, learns his ways, his prescriptions and his professional dignity. It is a mystery, when practice is based on some theory of therapeutics which goes outside of human experience for its justification.

Science is alike to all men who have grasped its data and its conclusions. Art will vary with the personality of the individuals who practice it. Sound medicine must rest on science. Whoever treats the ills of the human body successfully must know this body in health and in disease. He must know the range of its disorders, its abuses, its dislocations and its parasites. Those who try to heal without knowledge of the actual conditions with which they deal are of necessity imposters.

The limit of "medical freedom" is a very plain and natural one. Let the patient take whatever kind of treatment he may wish, but let no treatment be administered by persons who have no knowledge of the fundamental facts of medical science. If the requirement of technical knowledge is fatal to any school of therapeutics, it is time that that particular form of robbery should be done away with. Taking chances with the lives of others for the money there is in it is not a profession to be encouraged.

The basis of the varying schools of medicine lies not in science but in the varying theories of symptoms. In the old days, when micro-organisms were unknown, when physiology was elemental and pharmacology itself a form of metaphysics, it is not strange that symptoms engrossed the attention of the practitioner and that there grew up widely different theories in regard to their treatment.

It was natural in those days that men should face symptoms with remedies calculated to remove or obscure them. This method, contemptuously designated as al-

lopathy, "unlike treatment," as the drug and symptom were unlike, had in it the germ of better things, because it gave play for experiment and was not bound hand and foot by any predetermined notion. It was a step forward from the idea of the dark ages, that each disease had some definite predestined remedy, that for each ailment, that is a special group of symptoms, there was somewhere, somehow, some cure mysteriously provided in nature if we could only find it out.

As the plant world lies all about us, as most plants secrete or produce something with a definite odor or taste, balms, resins, aromatic oils, bitter alkaloids, strange substances useless for any purpose unless it be that of medication, it was natural that men should turn their attention to these substances. Some of these products or simples showed strange effectiveness. Others did no harm and were therefore suspected of doing good. Quinine was thought to cure malaria by setting up a feverish condition like that arising from malaria itself. Digitalis controlled the action of the heart. Mandrake, senna, rhubarb, kept the bowels open. The pink was death to worms. Yerba buena, yerba santa, sage tea, catnip tea, tansy tea, saffras tea, as well as tar, molasses and sulphur were "good for the blood," especially in the spring, and the tonic effect of almost any bitter bark dissolved in alcohol was highly appreciated.

Out of this notion that a specific disease had a specific cure, naturally arose the form of quackery involved in the patent medicine. Its practical value lay in the elimination of the doctor, or rather in postponing his arrival until near the end. It is very simple, by reading an advertisement in an easy-going newspaper, or by the perusal of an almanac, to pick out your own disease from the list of symptoms graphically set forth. Almost everyone has felt headaches, twinges, blurrings, ringings, smartings, aching, givings and misgivings, and these all indicate the necessary drug. If this drug be essentially whisky and water made sweet or bitter by some easy stain or if some more virtulent or effective poison is used, there is likely to be enough of apparent satisfaction or of

change of symptoms to justify a written testimonial and another bottle of the drug. Or if the basal constituent of the medicine be merely water, the effect of hope with the lack of visible harm is likely to lead to the same results. In either case the self-medication is likely to produce no effect or an effect worse than nothing.

While much that is now sold in the drug stores represents merely a harmless or sometimes useful physician's prescription, the aggregate result of the patent medicine is the building up of gigantic systems of robbery on the one hand and a corresponding damage to public health on the other.

The way out of the patent medicine domination lies in the better training of physicians on the one hand and the enlightenment of public opinion on the other. No more effective agency exists for the forming of public opinion than an aggressive administration of the bureau at Washington which deals with pure food and pure drugs. No single agency in this direction has counted for so much as the personal work of one man, who has spent his life in fighting frauds and poisons. But we must have a hundred Wileys in the public service where now we have but one.

Among the host of specifics, men naturally sought for some guiding rule, some informing spirit that would tell them beforehand and once for all how to match these diseases with the predestined healing agent. Sometimes this was found in the looks of the plant. Its flowers or leaves or roots somehow simulated the disease it was bound to cure. Thus the figwort was denominated scrophularia, apparently for its scrofulous appearance. The liver-shaped leaves of hepatica, the liverwort, showed clearly what was expected of it. And in the ignorance of what was really the matter and what really happened after a remedy was absorbed, there was as many successes as failures, and the dark mystery of the profession prevented any following up of either.

A more scientific application of the method of resemblances lay in the study of the effects produced by a drug in relation to the symptoms of the malady it was to cure. Like symptoms, like effects.

Like cures like. If your patient is troubled with colic, give him a colic producing drug; if with eczema give him something to make the skin smart. The same principle would hold for all diseases.

But with this went the saving clause of homeopathy, or like treatment—Don't give much and give good nursing. As time, patience and good nursing are the best of drugs, this method has had a large vogue as well as a large effectiveness. If it is based on a sound study of the human body, its defects, its slips and its parasites, this method must merge into the real practice of medicine. For, knowing the distemper, its causes and its range, the method of treatment is a minor matter.

The idea that a disease has a definite drug as its remedy, whether in large quantities or small, is a relic of the middle ages. Drugs do not heal anything. Some are palliative, resting in the category of vaseline, cold cream or talcum powder, some kill parasites directly as quinine kills the animal organisms known as malaria. Sulphur is death to the itch, the visible cause of the distemper once thought almost incurable, and known as the "gall struck inwards." Others do evil as stimulants or counter irritants, that good may come, helping on the one hand through the incidental damage on the other.

But the metaphysical relation of drug to symptom has no existence and has passed out of medical practice never to return.

With doubts of the efficiency of drugs as remedies came theories of therapeutics by which all drugs were discarded. Orthopathy in its day rejected them all, relying on the well-known disposition of nature to heal her wounds whenever she is let alone. Hydropathy set people to sweating under close envelopes of wet sheets, often, it is true, to her great advantage. I can remember when the Wet Sheet Packing and the Over Soul were the test and signal of a progressive nature, much as today are the Referendum and Recall.

Mind-healing in various forms has always found its place. It is a notorious fact that when the symptoms of any disease are graphically set forth, the average reader finds most of these symptoms

in himself. It is only a step to the conclusion that these symptoms are the cause of the disease. If you can create the impression that the symptoms do not exist you take away the disease. For disease and symptoms are alike the product of morbidity of mind. To have faith is to cure this morbidity. "Sin, sorrow and sickness," says one of the leaders of this form of therapeutics, "are all three illusions of the sinful soul. * * * They are but troubled dreams of a darkened soul. * * * In afflictions of disease and dread and death one must say 'This is a dream.' Then it becomes a dream and we rise above it into an atmosphere of perfect serenity. * * * We need not deal with the body, for the body does not exist. It is dull, heavy, aching because it is the dead residuum of dream. When we forget it, it is no longer there. Treat a belief in sickness as you would a sin, with sudden dismissal."

It is undoubtedly true that a serene spirit is a valuable agency in the recovery from disease. It is likewise true that suggestion has a mighty potency when it is rightly applied. It is a legitimate and recognized branch of therapeutics, which may be destined to have a wide application in the future treatment of disorders of the nervous system. But it is likewise true that suggestion heals no broken bones, a spirit unperturbed gives no safeguard against poisoned mosquitoes, and the power of the will and the imagination is potent chiefly against disorders of the imagination and the will.

The first and most important thing in any treatment is to find out what is the matter and then, if may be, to remove the cause from which the symptoms flow. No system of philosophy, no cult of religion gives us help as to matters of fact. It does not strengthen our knowledge of the demands of the body to deny the body's existence. The whole fabric of modern science, the whole fabric of modern civilization is based on the conception of the reality of external things. The sanity of life is conditioned on our belief in realities, the mental states produced by contact with external things as distinct from illusions, those mental states

arising from conditions within ourselves. This distinction is the foundation of safety in life. Our body through its nervous system is cognizant of realities. The defects in this nervous system may elude our view with illusions. The art of sound living is to discriminate between the two sets of impressions. To confuse reality and illusion is to confuse life and death. To show that perception and reason may sometimes be deceived is not to add reality to the figments of imagination. It does not advance science to doubt the things we know to be true in order to give proof to propositions we know to be false.

We may be therefore certain that progressive medicine will still believe in the reality of the human body and the rational veracity of the world of sense.

We may be sure that medical science does not grow in accordance with the theories of any school of medicine or of metaphysics. It is advanced by the study of things as they are, by the use of tools of precision on definite problems, by the microscope and scalpel, the test tube and reagent, by the culture of germs and the discovery of germ-killers. It grows by probing the actual causes of bodily disturbances and the actual removal of such causes. It grows, as all sciences have grown, by the method of induction, by putting two and two together and verifying the apparent existence of four as a resultant.

And in the future of medicine, the mere removal of disease must play more and more a subordinate part. Most disease can be prevented. Above all therapeutics stands sanitation. It is possible to remove causes of disease long before any disease begins. It is possible to heal our patients long before they are ever sick. Our knowledge in many fields is not adequate for this result. No one can be attacked by an infectious disease unless we have somehow or other permitted the infection.

In modern war, it now costs on the average about \$15,000 to kill a man. In the late Boer war, this expense ran up to nearly \$40,000. It is cheaper to save men. It is cheaper to stop killing. In our own country, in time of peace, when nothing but peace is possible among civil-

ized nations, we spend nearly a million dollars a day on matters concerned with past or future wars; \$850,000 a day on future wars alone, that we may not be caught napping when the day of the impossible shall arrive.

A wiser and more civilized nation would give part of this sum to the prevention or stamping out of the worst of the infectious diseases. For if we are napping these are sure to come. The danger of the red plague, present everywhere, is infinitely greater than that of war with any part of Europe or of Asia. The terrible affliction of the unknown parasite which shows itself as infantile paralysis awaits the strong arm of the people to set it aside entirely. No disease would long exist if we make adequate quarantine provision. Its germs, animal or plant, must be carried from man to man or from animal to man, else the race of parasites would die out. Now that we know what our enemies are it is possible for us to fight them. This I said in a review of Tyndall's work which I printed thirty-five years ago. Now that we know what our enemies are, and now that we know that they can be fought successfully only by national and international co-operation, it is our duty thus to fight them. It shows a lack of national manliness to continue to bear these ills when a little energy with the knowledge we have is adequate to throw them off.

THE TRUTH ABOUT THE "NEW CURE FOR CONSUMPTION"

The Friedmann treatment for consumption has recently been announced in a most sensational way, through the newspapers of an American newspaper syndicate. According to the Journal of the American Medical Association this method of treatment does not appear to be based on any new principle. It represents simply another effort to utilize for curative and preventative purposes the antigenic substances in the tubercle bacillus, without at the same time introducing any toxic or harmful substances. In order to secure this effect, living bacilli, devoid of virulence, so it is asserted, are injected deep into the muscles. These bacilli are said

to be derived from the turtle, but the method by which they are rendered harmless is withheld. This secrecy is not in accord with the ethical standard of scientific medicine. The report as to the results of the practical use of this carefully-guarded secret shows, first, that in the experiments on guinea-pigs complete protection has not been obtained. Furthermore, there are no indications that it has been possible to cure tuberculous guinea-pigs by this method. The treatment consequently lacks an experimental basis. A really and promptly effective cure for tuberculosis should cure tuberculosis in guinea-pigs and other animals. The injections so far made by Friedmann in children seem to indicate that the fluid injected is harmless in children, and that is all. We have no evidence that the injections will prevent tuberculosis in children, and from the nature of the case it will be exceedingly difficult to determine what the effect of such injections really is. The alleged curative effects do not seem to be any more pronounced and definite than those obtained with the various forms of tuberculin when properly used. Besides, the use of this fluid is probably not without danger. In view of these considerations, says *The Journal*, there is not sufficient warrant for any other attitude toward Friedmann's treatment of tuberculosis than one of critical neutrality and judicious skepticism. It concerns secret procedure without adequate experimental basis and without any better results to its credit than produced by tuberculin properly used.

RESPONSIBILITY OF THE NEWS-PAPER

Newspaper sensationalism has seldom equaled the announcement, which appeared in a certain group of newspapers last week, of Friedmann's "cure," for consumption. A syndicate letter, in the form of a cable from Berlin, and written by William G. Shepherd, announced without equivocation the discovery of a positive cure in "Friedmann's serum" (which, by the way, is not a serum). The matter was emphasized, however, in an unusual

manner, in the form of a bracketed so-called "editor's note," introducing the article:

"Editor's Note.—This exclusive cable from the Press [Post, News, Herald] staff correspondent in Europe is of tremendous importance. We print it with every confidence in its truth—a wonderful, glorious truth for hundreds of thousands of tuberculosis sufferers in America. We believe it is the greatest piece of news printed in any paper in many years. Shepherd is a trained investigator of long experience. His attitude towards things is distinctly skeptical—Missourian. He delights in exposing fakes and quacks. That he sends this cable is proof of a most careful investigation of Dr. Friedmann and his cure. He promises us a fuller report by the first mail steamer."

With practically no modification, except the introduction of the name of the particular newspaper using it, this note appeared in the various newspapers in the syndicate. Nearly all had big display headings, some running across the entire page. The Cincinnati Post outdid any other in this regard. Running across the page was the two-line legend, "Cure for Tuberculosis is Now Certain, Post Investigates Claims of Great German Scientist and Finds They are Well Founded." It emphasizes the "editor's note".

"Two weeks ago the press association carried a brief dispatch from Berlin, declaring that a noted scientist there had at last discovered the long-sought cure for tuberculosis. The Post at once sent William G. Shepherd, its European correspondent, to interview the discoverer and to ascertain the exact truth,' etc."

Evidently the readers of this newspaper were impressed with its tremendous enterprise. Of course the newspapers did not realize how they were being worked, and yet they might have taken a hint from this, quoted from Shepherd's letter:

"When will you send the serum to the United States?"

"I cannot tell. For the present I intend to treat all cases here in Berlin personally. I cannot send the serum abroad indiscriminately, for it might get into irresponsible hands."

"The truth of the matter is that Dr. Friedmann is trying to sift out one reliable offer for the American rights from a flood of telegraphic proposals from the United States, and the doctor hesitates to discuss the question of American rights over the cable. Representatives of several American interests will shortly be in Berlin to lay offers before the Doctor personally, and the chances are that the cure will be in the United States before many months."

The serious phase of such sensational announcements, however, is their cruelty. Had these newspapers realized that the hopes of practically every consumptive in the United States would be aroused by this announcement, they certainly would have modified at least the "editor's note," which was so adroitly offered them in connection with the letter. It is characteristic of human nature in general to put trust in anything that seemingly offers help in an otherwise hopeless condition. It is again the case of the drowning man and the straw. This is particularly true of those wretched human beings who are afflicted with tuberculosis, and to exploit in so sensational a manner even the most apparently promising cure without the confirmation of time and the judgment of those most competent to judge, is an absolute and indefensible refinement of cruelty. It is almost unnecessary to state that there has been no scientific evidence to warrant the claims made for this so-called consumption cure which would justify even a careless press in heralding it in such an extravagant manner. The Grand Rapids Evening Press is the only newspaper, so far as we have seen, says The Journal of the American Medical Association, that recognizes its responsibility in this respect. It modified the "editor's note" as follows:

"Once again it is announced that a positive cure for tuberculosis has been discovered. . . . Similar announcements have been made before, and the 'cure' under extended observation has always failed. . . . The Evening Press gives this report for what it is worth . . . but is itself skeptical and considers that faith should not be pinned to it until it has been demon-

strated by reputable doctors in America.—Editor."

What a pity that other newspapers could not have appreciated their responsibility as did this editor!

URBAN AND RURAL TYPHOID FEVER

There seems to be a wide-spread belief that typhoid fever is peculiarly a disease of small communities. The regular autumnal increase in this disease in most cities is even referred by some writers to infection contracted during a vacation "in the country." Whatever the importance of "vacation typhoid"—and there is reason to think it has been overestimated—there can be no doubt that, contrary to popular opinion, in some localities typhoid is more prevalent in urban communities.

The incidence of typhoid fever in city and country communities in several New England states has been recently studied by Sedgwick, Taylor and MacNutt. These authors conclude that as far as the state of Massachusetts is concerned typhoid could not be said to be a rural disease in the eighteen years prior to 1908, but was on the contrary distinctly more prevalent in urban communities. In Connecticut a similar condition existed, but in New Hampshire it appeared that there was no marked difference in this respect between rural and urban groups. Before 1890, as these authors point out, typhoid deaths in both Massachusetts and Connecticut were more prevalent in proportion to the population in the country than in the city districts.

It is not difficult to understand these results. The death rate from typhoid fever depends more on other factors than on city and country conditions as such. A large city with polluted water supply may maintain a constantly higher typhoid fever rate than the adjacent country towns and rural districts. On the other hand a city with a good water supply, a pasteurized milk-supply and a proper system of disposing of excretal refuse will today almost certainly have less typhoid fever than the smaller communities in its immediate neighborhood. Probably few

places in the United States, large or small, will have so low a death-rate from typhoid for the year 1912 as Chicago and Cleveland.

Improper methods of disposing of excreta in the country, with the attendant danger of fly infection, would seem to favor the spread of typhoid fever in rural districts, but a counterbalancing factor is the contact with a large number of persons which is characteristic of city life and would tend to increase the opportunities for infection in cities through the agency of carriers or convalescents. There is no reason why a uniform difference between city and country should be expected. We cannot generalize by asserting that typhoid fever is more prevalent in either the city or the country. In some regions the factors that make for infection are more active in the large communities of those regions than the small communities; in others the reverse is true. Country or city life itself is in one way determinative of typhoid fever infection, according to The Journal of the American Medical Association, and it is confusing to declare that typhoid is today either an urban or a rural disease.

The more money The Journal of the Medical Association of Georgia makes out of its advertisements the less it costs the State Association to run the paper. This means that every member of the State Association has an interest in the advertising columns. If one business firm advertises and another does not, patronize the one that does. It is money in your pocket.

GEORGIA'S TROUBLES

Last month we called attention to the complaint from various states that there was more or less public antagonism to good and fairly high-standard medical laws and general antagonism to the medical profession. We may add Georgia to the list, for the legislature of that state has refused to pass a medical bill which would bring the standard of medical education up to that of most other states. In the issue of the Journal of the Medical

Association of Georgia for October we find the following illuminating remark: "Our state is rapidly becoming the dumping ground for all manner of quacks and charlatans, and we are doing nothing to prevent such state of affairs." The same article also asserts that thousands of dollars will be spent by certain interests to prevent the passage of the bill when it again comes before the legislature for its attention. —California Journal of Medicine.

NEW MEMBERS SINCE LAST ISSUE

Dr. A. J. Kemp	Leslie, Ga.
Dr. Sam Wise	Plains, Ga.
Dr. J. A. Combs	Locust Grove, Ga.
Dr. T. E. Drewry	Griffin, Ga.
Dr. Paul Peniston	Newnan, Ga.
Dr. W. L. Davis	Albany, Ga.
Dr. W. E. Yankey	Atlanta, Ga.
Dr. L. T. Pattillo	Atlanta, Ga.
Dr. L. P. Moon	Atlanta, Ga.
Dr. C. C. Aven	Atlanta, Ga.
Dr. I. T. Catron	Atlanta, Ga.
Dr. J. H. Crawford	Atlanta, Ga.
Dr. S. R. Roberts	Atlanta, Ga.
Dr. Wm. Rawlings	Sandersville, Ga.
Dr. I. N. B. Spence	Social Circle, Ga.
Dr. J. M. Barnett	Albany, Ga.
Dr. J. P. Davis	Davisboro, Ga.
Dr. Jno. H. Hall	Lumber City, Ga.
Dr. J. C. Rollins	Dalton, Ga.
Dr. B. T. Wise	Plains, Ga.
Dr. R. E. L. Burford	Brunswick, Ga.
Dr. R. L. Fox	Brunswick, Ga.
Dr. A. K. Bell	Madison, Ga.
Dr. W. E. Adams	Madison, Ga.
Dr. J. T. Stukes	Americus, Ga.

DeSoto Hotel
Savannah, Ga.

LIST OF STATE MEDICAL SOCIETIES

This information is correct to date of going to press, so far as we have been able to obtain it from the various secretaries. Officers or others are requested to notify us of any errors or required changes. For further information concerning any society address the secretary.

SOCIETY	PRESIDENT	SECRETARY	NEXT ANNUAL MEETING
Alabama, Medical Assn. of the State of	H. T. Inge, Mobile	J. N. Baker, 602 So. Perry st., Montgomery	Mobile, April 16, 1913.
Arizona Medical Association	Francis E. Shine, Bisbee	John W. Flinn, Prescott	
Arkansas Medical Society	Morgan Smith, Little Rock	C. P. Meriwether, 309 S. Tr. Bldg., Little Rock	
Connecticut State Medical Society	John G. Stanton, New London	Walton R. Steiner, 4 Trinity st., Hartford	
California, Medical Soc. of the State of	Thos. W. Huntington, San Francisco	Philip M. Jones, Butler Bldg., San Francisco	Pueblo, September 24-26, 1912.
Colorado State Medical Society	Walter A. Jayne, Denver	Melville Jones, Metropolitan Bldg., Denver	Wilmington, Oct. 8, 1912.
Delaware State Medical Society	Frank L. Springer, Newport	G. W. K. Forrest, 901 Jackson st., Wilmington	Savannah, April 16, 1913.
Florida Medical Association	Albert H. Freeman, Starke	J. D. Fernandez, Jacksonville	
Georgia, Medical Association of	W. W. Pilcher, Warrenton	Wm. C. Lytle, Augusta	
Medical Society of Hawaii	Irwin J. Shepherd, Honolulu	Wm. C. Hobbs, Honolulu	
Illinois State Medical Society	W. K. Newcomb, Champaign	Edmund W. Wells, Ottawa	Indianapolis, Sept. 27-28, 1912.
Indiana State Medical Association	L. W. Little, Davenport	Chas. N. Combs, Terre Haute	
Iowa State Medical Society	William F. Howard, Pocatello	V. L. Freyner, Council Bluffs	
Idaho State Medical Association	William F. Howard, Pocatello	Ed. E. Maxey, Boise	
Kansas Medical Society	John T. Astell, Newton	Chas. S. Huffman, Columbus	Louisville, Oct. 12, 1912.
Kentucky State Medical Association	J. G. Carpenter, Stanford	Joseph D. Martin, 141 Elk pl., New Orleans	Baton Rouge, 1913.
Louisiana State Medical Society	B. A. Ledbetter, New Orleans	Wilfrid Haughey, 24 W. Main st., Battle Creek	
Michigan State Medical Society	D. Emmett Welsh, Grand Rapids	Thos. McDavitt, 210 Lowry Bldg., St. Paul	Duluth, August 14-15, 1912.
Minnesota State Medical Association	Halvor Sneve, St. Paul	E. F. Howard, First Nat. Bank Bldg., Vicksburg	Vicksburg, 1913.
Mississippi State Medical Association	S. W. Glass, Dublin	E. J. Goodwin, 3525 Pine st., St. Louis	
Missouri State Medical Association	Robert H. Goodier, Stoutsville	Herbert D. Kistler, Murray Hospital, Butte	
Montana Medical Association	T. C. Witherspoon, Butte	W. Bean Moulton, 622 Congress st., Baltimore	
Maine Medical Association	Stanley P. Warren, Portland	John Ruhrah, 1211 Cathedral st., Baltimore	
Maryland, Medical and Chir. Faculty of	A. C. Harrison, Baltimore	D. E. Sullivan, 7 No. State st., Concord	Rochester, 1913.
Massachusetts Medical Society	Geo. B. Shattuck, Boston	Walter L. Burrage, 282 Newbury st., Boston	
New Hampshire Medical Society	John F. W. Whitbeck, Rochester	Wisner R. Townsend, 17 West 43d st., New York	
New York, Med. Soc. of the State of	Daniel Strock, Camden	W. J. Chandler, 65 So. Orange ave., So. Orange	
New Brunswick Medical Association	Andrew D. Nesbit, Tekamah	Jos. M. Airin, 466-468 Brandeis Block, Omaha	
Nebbraska State Medical Society	C. T. Purdy, Monticton, N. B.	J. S. Bentley, St. John, N. B.	
New Brunswick Medical Society	Alfred A. Kent, Lenoir	David A. Stanton, High Point	
North Carolina Med. Soc. of the State of	Robert L. Bradley, Roswell	R. E. McBride, Las Cruces	
New Mexico Medical Association	Clinton E. Spicer, Litchville	H. J. Rowe, Casselton	
Ohio State Medical Association	Horace Bonner, Dayton	J. H. J. Upham, 186 E. State st., Columbus	
Oregon State Medical Association	E. A. Sommer, Portland	M. B. Marcellus, 901-3 Selling Bldg., Portland	
Oklahoma State Medical Association	Charles L. Reeder, Tulsa	Claude A. Thompson, Muskogee	Scranton, Sept. 23-26, 1912.
Ontario Medical Association	Herbert E. Bruce, Toronto	F. Arnold Clarkson, 471 College St., Toronto	
Pennsylvania, Med. Soc. of the State of	James Tyson, Philadelphia	Cyrus Lee Stevens, Athens	
Rhode Island Medical Society	Fredrick T. Rogers, Providence	S. A. Welch, 253 Washington st., Providence	
South Dakota State Medical Association	William G. Smith, Sidney	R. D. Alway, 212 Main st., Aberdeen	
South Carolina Medical Association	Chas. M. Rees, Charleston	Edgar A. Hines, Seneca	Nashville, April 8-10, 1913.
Tennessee State Medical Association	O. Dulaney, Dyersburg	Perry Bromberg, Nashville, 315 Jackson Bldg.	Ogden, Oct. 1-2, 1912.
Texas, State Medical Association of	J. H. McCracken, Mineral Wells	H. Taylor, W. National Bank Bldg., Fort Worth	Montpelier, Oct. 10-11, 1912.
Utah State Medical Association	Robert W. Fisher, Salt Lake City	W. Brown Ewing, Salt Lake City	Norfolk, Oct. 22-25, 1912.
Vermont State Medical Society	F. T. Kiddier, Woodstock	C. H. Beecher, Burlington	
Washington, Medical Society of	Hugh M. Taylor, Richmond	Paulus A. Irving, Farmville	
Washington State Medical Association	Leon L. Love, Tacoma	C. H. Thomson, Seattle	
Wisconsin, State Medical Society of	J. M. Dodd, Ashland	Charles S. Sheldon, 251 Langdon st., Madison	
West Virginia State Medical Association	G. O. Henry, Fairmont	A. P. Butt, Davis	
Wyoming State Medical Society	A. O. Hamilton, Thermopolis	W. H. Roberts, Sheridan	Sheridan, September, 1912.

RATES FOR REPRINTS

100.....	\$1.00 per page
200.....	1.25 per page
500.....	1.50 per page
1000.....	2.00 per page

Covers to count as four pages when ordered

The Journal is owned and published by the Association, and all profit goes to make it better. Each member of the Association is financially interested in the Journal to the same extent as every other member, and each member is rightfully anxious for the financial success of the publication.

The greater this financial success, the greater the practical value can be made to the individual member, and hence the greater the value as an advertising medium.

Our advertisers, by their patronage, help to support the Journal, and make its successful publication possible. In return they expect, and rightfully, a fair return for their money. Every dollar spent by a member of the Medical Association of Georgia with advertisers in our Journal, in preference to non-advertisers, is a dollar spent in advancing his own personal advantage, for he has contributed something indirectly to the betterment of his own property.

The Journal cannot exist without the advertisers and their good will.

The advertisers cannot continue in business without the patronage of the medical profession.

The medical man cannot continue in business without the supplies for sale by the advertisers.

The interests of all are identical—the profession must depend upon the manufacturers, etc. The manufacturers, drug houses, etc., must depend upon the more progressive and more successful physicians. The interests of both are best served through the official Medical Journal—the Journal published by the profession in its own best interests, scientifically and ethically.

ADVERTISING RATES

1	Page 1 year.....	\$150.00
$\frac{1}{2}$	" 1 "	87.50
$\frac{1}{4}$	" 1 "	50.00
$\frac{1}{8}$	" 1 "	33.00
$\frac{1}{16}$	" 1 "	25.00
1	" 6 months.....	87.50
$\frac{1}{2}$	" 6 "	50.00
$\frac{1}{4}$	" 6 "	33.00
$\frac{1}{8}$	" 6 "	25.00
$\frac{1}{16}$	" 6 "	20.00
1	" 3 "	50.00
$\frac{1}{2}$	" 3 "	33.00
$\frac{1}{4}$	" 3 "	15.00
$\frac{1}{8}$	" 3 "	10.00
1	" 1 month.....	25.00
$\frac{1}{2}$	" 1 "	15.00
$\frac{1}{4}$	" 1 "	10.00
$\frac{1}{8}$	" 1 "	7.50

These rates do not apply to cover pages, space next to reading matter, or matter requiring to be reset.

Hypodermatic

Tablets

that may be
depended upon
in every
emergency.



WHEN a physician administers a preparation hypodermatically he wants prompt, precise action. Dependence in such an emergency is upon a single little tablet. And that tablet—will it justify the faith? Is it *medicinally active*? Is it *full strength*? Is it *soluble*? These become living questions.

The practitioner who uses Parke, Davis & Co.'s hypodermatic tablets may do so with full assurance of their reliability.

Our hypodermatic tablets are of guaranteed potency. Every drug entering into their composition is rigidly tested, and the active component is present in the precise amount stated on the label.

Our hypodermatic tablets are of uniform strength. The content of each tablet is accurately determined, the medication being uniformly subdivided by our method. The dose is invariable.

Our hypodermatic tablets are freely soluble. They dissolve completely in lukewarm water in a very few seconds. *Test them by the watch!*

Our hypodermatic tablets are stable. They are molded by a process that insures firmness. They do not crumble in shipping or handling.

Tubes of 25—not 20.

Parke, Davis & Co.'s hypodermatic tablets are supplied in tubes of 25. Certain competing tablets are marketed in tubes of 20. SPECIFY "PARKE, DAVIS & CO." ON YOUR ORDERS. Get 25 tablets to a tube—not 20.

Parke, Davis & Co.

Home Offices and Laboratories,
Detroit, Mich.

EYE, EAR AND THROAT NUMBER

The Journal of the Medical Association of Georgia



PUBLISHED MONTHLY UNDER DIRECTION OF THE COUNCIL

Editorial and Business Office—300, 302 and 304 Harison Building.

Subscription Price, \$1.00

Entered as second-class matter, August 4, 1911, at the Post Office at Augusta, Ga., under the Act of March 3, 1879.

Vol. II

AUGUSTA, GA., FEBRUARY, 1913

No. 10

A BOOK OF THE UTMOST VALUE TO THE PRACTITIONER THE DISEASES OF THE STOMACH WITH SPECIAL REFERENCE TO TREATMENT

By CHARLES D. AARON, M.D.

Professor of Gastro-Enterology and Adjunct Professor of Dietetics in the Detroit College of Medicine, Detroit, Mich.

Octavo, 555 pages, 42 engravings and 21 plates. Cloth, \$4.75 net.

Disorders of the stomach are among the most common and distressing of human afflictions, and yet this organ, owing to its accessibility and the control that can be exercised over its misuse, readily responds to modern scientific treatment. The literature of the stomach is vast, but it is possible to condense the practical features into a single volume, and this Dr. Aaron has successfully accomplished. He has covered the medical aspect of gastric disorders in such manner as to answer the actual needs of the physician, aiming always to afford practical knowledge and presenting the methods of treatment in full detail. The chapter on Examination of Stomach Contents includes those tests which will best assist in diagnosis and treatment. In addition to the chapter on Medication, due attention has been given to the use of antilytic serum and bacterial vaccines, an evidence that this work reflects the latest knowledge in its rapidly advancing department.

PHILADELPHIA
706-8-10 Sansom Street

LEA & FEBIGER

NEW YORK
2 West Forty-Fifth St.

CONTENTS AND DIGEST

ORIGINAL ARTICLES

The Importance of the Ophthalmoscope in Pregnancy. By Dr. Dunbar Roy, Atlanta	315
Corrctage of the Pharynx in Adults. By Maury M. Stöpler, M.D., Macon	317
The Extirpation of the Lachrymal Sac in Chronic Dacryochystitis. By F. Phinizy Calhoun, A.B., M.D., Atlanta....	319
Follicular Conjunctivitis—Its Relation to Adenoids. By T. E. Oertel, M. D., Augusta	322
Nose and Throat Reflexes Causing Cough. By Richard R. Daly, M.D., Atlanta	324
Discussions	327
The Importance of Preserving the Integrity of Contiguous Structures when operating on Tonsils. By C. M. Harris, M.D., Johnstown, Pa.....	330
Eight Years of Chloroform Anesthesia in Nose and Throat Surgery. By Dr. Chas. Prevost Grayson, Philadelphia....	332

EDITORIALS

Dues	337
Send in Titles	337
Committee on Entertainment	337
Death of Dr. T. J. Carswell	338
New Medical Building Dedicated	338
The Specialist	338
Senate Declines to Consider Owen Bill	338
Alleged Discovery of a "Cancer Germ"	339

SOCIETY NOTES

First District Medical Society	340
The Library of the Georgia Medical Society, Savannah.....	340
Eleventh District Medical Society	341

BOOK REVIEWS

Psychanalysis: Its Theories and Practical Application.....	342
A Treatise of Diseases of the Eye	342
Safeguarding the Special Senses	342

SELECTED ARTICLES

Eye-Strain Caused by "Movies"	336
Resume of Examinations Held by the Board of Medical Examiners in Atlanta, October, 1912	343
Medical College Did Not Appear	343
Savannah Physicians Entertain Dr. J. Ewing Mears	343
Nephritis Following Tonsillitis	344
Physical Strength	344

PANOPEPTON

Affords the nutrition to be derived from the entire soluble substance of prime lean beef and the entire soluble substance of whole wheat presented in a highly diffusible form in a sterile agreeable solution.

PANOPEPTON

Makes no demand upon the energy of the patient; on the contrary, is instantly available in conserving and reinforcing energy.

Literature giving full information about Panopepton, and analysis has always been freely submitted to the physician; will be sent upon request.

FAIRCHILD BROS. & FOSTER

NEW YORK

OFFICERS

President.....W. W. PILCHER, M.D., Warrenton
 First Vice-Pres.....J. W. PALMER, M.D., Ailey
 Second Vice-Pres.....T. H. HALL, M.D., Macon
 Sec.-Treas.....W. C. LYLE, M.D., Augusta

COUNCILORS

First Dist.—J. Lawton Hiers, M.D.....Savannah
 Second Dist.—Gordon Chason, M.D.....Bainbridge
 Third Dist.—V. O. Harvard, M.D.....Arabi
 Fourth Dist.—C. L. Williams, M.D.....Columbus
 Fifth Dist.—J. N. Ellis, M.D.....Atlanta
 Sixth Dist.—R. H. Stovall, M.D.....Macon
 Seventh Dist.—W. P. Harbin, M.D.....Rome
 Eighth Dist.—I. H. Goss, M.D.....Athens
 Ninth Dist.—W. B. Hardman, M.D.....Commerce
 Tenth Dist.—W. J. Cranston, M.D.....Milledgeville
 Eleventh Dist.—A. G. Little, M.D.....Valdosta
 Twelfth Dist.—E. T. Coleman, M.D.....Graymont

VICE-COUNCILORS

First Dist.—A. J. Mooney, M.D.....Statesboro
 Second Dist.—C. K. Sharpe, M.D.....Arlington
 Third Dist.—A. G. Crittenden, M.D.....Shellman
 Fourth Dist.—T. S. Bailey, M.D.....Newnan
 Fifth Dist.—F. K. Boland, M.D.....Atlanta
 Sixth Dist.—J. H. Riley, M.D.....Haddock
 Seventh Dist.—J. H. Hammond, M.D.....LaFayette
 Eighth Dist.—E. G. Adams, M.D.....Greensboro
 Ninth Dist.—J. S. Tankersley, M.D.....Ellijay
 Tenth Dist.—G. L. Carpenter, M.D.....Wrens
 Eleventh Dist.—J. G. Tuten, M.D.....Jesup
 Twelfth Dist.—M. L. Currie, M.D.....Vidalia

STANDING COMMITTEES**Scientific Work**

E. E. Murphey, M.D., Chairman.....Augusta
 V. H. Bassett, M.D.....Savannah
 W. C. Lyle, M.D., ex-officio.....Augusta

Medical Defense

M. A. Clark, M.D., Chairman.....Macon
 J. N. Ellis, M.D.....Atlanta
 E. T. Coleman, M.D.....Graymont
 J. G. Dean, M.D.....Dawson
 E. G. Jones, M.D.....Atlanta

Organization

T. J. McArthur, M.D., Chairman.....Cordele
 G. R. White, M.D.....Savannah
 W. B. Hardman, M.D.....Commerce

Public Policy and Legislation

J. R. Littleton, M.D., Chairman.....Augusta
 W. L. Champion, M.D.....Atlanta
 C. C. Harrold, M.D.....Macon

President and Secretary, ex-officio

Necrology

V. D. Lockhart, M.D., Chairman.....Maysville
 W. B. Emery, M.D.....Atlanta
 S. S. Smith, M.D.....Athens
 M. F. Carson, M.D.....Griffin
 J. M. Hull, M.D.....Augusta

Arrangements

(Committee to be selected by the Chatham County Society)

Delegates to American Medical Association

W. H. Doughty, M.D.....Augusta
 E. G. Ballenger, M.D. (alternate).....Atlanta
 T. J. Charlton, M.D.....Savannah
 T. R. Wright, M.D. (alternate).....Augusta

COLLABORATORS**History of Medicine**

J. B. Baird, Sr., M.D.....Atlanta
 L. G. Hardman, M.D.....Commerce
 T. R. Wright, M.D.....Augusta

Medicine

W. W. Jarrell, M.D.....Thomasville
 Ralston Lattimore, M.D.....Savannah
 Thos. D. Coleman, M.D.....Augusta

Tuberculosis

C. H. Richardson, M.D.....Montezuma
 J. H. Hammond, M.D.....LaFayette
 T. E. Oertel, M.D.....Augusta

Pellagra

G. M. Niles, M.D.....Atlanta
 E. M. Green, M.D.....Milledgeville
 H. J. Baker, M.D.....Augusta

Nervous and Mental Diseases

L. M. Gaines, M.D.....Atlanta
 E. T. Gibbs, M.D.....Gainesville
 W. R. Houston, M.D.....Augusta

Pediatrics

W. Z. Holliday, M.D.....Atlanta
 M. A. Clark, M.D.....Macon
 N. M. Moore, M.D.....Augusta

Public Health

E. C. Benedict, M.D.....Athens
 H. F. Harris, M.D.....Atlanta
 E. E. Murphey, M.D.....Augusta

Surgery

W. F. Westmoreland, M.D.....Atlanta
 R. P. Glenn, M.D.....Columbus
 C. W. Crane, M.D.....Augusta

Orthopedics

H. J. Williams, M.D.....Macon
 Michael Hoke, M.D.....Atlanta
 H. M. Michel, M.D.....Augusta

Genito-Urinary and Syphilis

J. L. Farmer, M.D.....Savannah
 W. L. Champion, M.D.....Atlanta
 H. W. Shaw, M.D.....Augusta

Obstetrics

H. McHatton, M.D.....Macon
 R. L. Miller, M.D.....Waynesboro
 A. J. Kilpatrick, M.D.....Augusta

Gynecology

E. G. Jones, M.D.....Atlanta
 J. R. B. Branch, M.D.....Macon
 W. W. Battey, Jr., M.D.....Augusta

Eye, Ear, Nose and Throat

F. P. Calhoun, M.D.....Atlanta
 H. H. Martin, M.D.....Savannah
 W. C. Lyle, M.D.....Augusta

Roentgenology

E. R. Corson, M.D.....Savannah
 J. S. Derr, M.D.....Atlanta
 John C. Wright, M.D.....Augusta

Anaesthesias

T. J. Collier, M.D.....Atlanta
 Chas. Usher, M.D.....Savannah
 M. S. Levy, M.D.....Augusta

Laboratories

K. R. Collins, M.D.....Atlanta
 V. H. Bassett, M.D.....Savannah
 Everard Wilcox, M.D.....Augusta

DISTRICT SOCIETIES

DISTRICT	PRESIDENT	SECRETARY
First	E. T. Coleman.....Graymont	Chas. Usher.....Savannah
Second	Hugo Robinson.....Albany	F. M. Martin.....Shellman
Third	C. A. Greer.....Oglethorpe	M. R. Smith.....Cordele
Fourth	H. J. Goodwin.....Rooptville	Homer Boatright.....Carrollton
Fifth	W. D. Travis.....Covington	W. S. Ansley.....Decatur
Sixth	W. J. Little.....Macon	I. H. Adams.....Macon
Seventh	A. B. Greene.....Cartersville	T. Lowry.....Euharlee
Eighth	W. D. Travis.....Covington	E. M. Coleman.....Gainesville
Ninth	V. D. Lockhart.....Maysville	A. D. White.....Augusta
Tenth	J. R. Beall.....Blythe	G. A. Traylor.....Waycross
Eleventh	H. C. Wheelchel.....Douglas	T. J. Carswell.....Summit
Twelfth	J. L. Weddington.....Dublin	C. R. Riner.....Summit

COUNTY SOCIETIES

COUNTY	PRESIDENT	SECRETARY
Baldwin	J. W. Mobley.....Milledgeville	W. F. Tanner.....Milledgeville
Banks	V. D. Lockhart.....Maysville	J. D. Rice.....Homer
Bartow	A. T. Calhoun.....Cartersville	H. E. Felton.....Cartersville
Ben Hill	E. J. Dorminy.....Fitzgerald	L. S. Osborne.....Fitzgerald
Bibb	F. M. Cunningham.....Macon	W. D. Hereford.....Macon
Blue Ridge	J. S. Tankersley.....Ellijay	C. B. Crawford.....Blue Ridge
Brooks	S. S. Galuden.....Quitman	J. S. King.....Quitman
Bulloch	D. E. McEachern.....Statesboro	F. F. Floyd.....Statesboro
Burke	C. H. Cox.....Waynesboro	J. M. Byne.....Waynesboro
Butts	B. F. Aiken.....Jenkins	W. H. Steele.....Jackson
Carroll	M. M. Hallum.....Carrollton	R. E. Foster.....Carrollton
Chatham	V. H. Bassett.....Savannah	A. J. Waring.....Savannah
Clarke	A. C. Holliday.....Athens	M. F. Matthews.....Athens
Cobb	W. M. Kemp.....Marietta	W. H. Perkinson.....Marietta
Coffee	C. W. Roberts.....Douglas	Quitman Holton.....Douglas
Colquitt	J. H. Green.....Hartsfield	J. E. Lanier.....Moultrie
Coweta	T. B. Davis.....Newnan	T. S. Bailey.....Newnan
Crisp	A. J. Wheelchel.....Cordele	T. E. Bradley.....Cordele
Decatur	N. L. Spengler.....Donalsonville	Gordon Chason.....Bainbridge
DeKalb	A. R. Watkins.....Chamblee	W. S. Ansley.....Decatur
Dougherty	C. W. Walker.....Albany	Hugo Robinson.....Albany
Elbert	C. E. Earle.....Elberton	L. P. Eberhart.....Elberton
Emanuel	C. R. Riner.....Summit	R. C. Franklin.....Graymont
Floyd	W. W. Mangum.....Rome	W. L. Funkhouser.....Rome
Forsyth		J. H. Hockenull.....Cumming
Franklin	F. G. Moss.....Royston	B. T. Smith.....Carnesville
Fulton	L. B. Clarke.....Atlanta	R. R. Daly.....Atlanta
Gordon	W. B. Floyd.....Plainville	E. O. Shellhorse.....Calhoun
Greene	C. O. Copelan.....White Plains	E. G. Adams.....Greensboro
Habersham	W. V. Chandler.....Baldwin	R. B. Lamb.....Demorest
Hall	A. D. White.....Gainesville	E. T. Gibbs.....Gainesville
Hancock	R. C. Wiley.....Sparta	J. A. Brown.....Sparta
Jackson	L. Landers.....Commerce	J. C. Bennett.....Jefferson
Jasper	F. S. Belcher.....Monticello	C. L. Ridley.....Hillsboro
Jefferson	J. W. Pilcher.....Stellaville	G. L. Carpenter.....Wrens
Jenkins	L. J. Belt.....Milen	W. E. Rushing.....Milen
Laurens	J. J. Baston.....Dublin	W. C. Thompson.....Dublin
Lowndes	A. Griffin.....Valdosta	J. M. Smith.....Valdosta
Macon	C. H. Richardson.....Montezuma	C. A. Greer.....Oglethorpe
Madison	L. E. Roper.....Comer	J. L. Baker.....Carlton
Meriwether	E. B. Terrell.....Greenville	P. W. Fitts.....Greenville
Monroe	J. F. Lancaster.....Forsyth	J. O. Elrod.....Forsyth
Muscogee	J. M. Crooke.....Columbus	G. S. Murray.....Columbus
McDuffie	Sterling Gibson.....Thomson	B. F. Riley.....Thomson
Newton	S. W. Everett.....Almon	O. L. Holmes.....Covington
Oconee	J. T. Elder.....Farmington	W. M. White.....Watkinsville
Ocmulgee	J. D. Herrman.....Eastman	J. C. Wall.....Eastman
Pike	R. A. Mallory.....Concord	M. M. Head.....Zebulon
Polk	C. V. Wood.....Cedartown	H. M. Hall.....Cedartown
Putnam	V. H. Taliaferro.....Eatonton	S. A. Clark.....Eatonton
Randolph	E. C. McCurdy.....Shellman	F. G. Barfield.....Cuthbert
Richmond	T. D. Coleman.....Augusta	W. C. Kellogg.....Augusta
Spalding	E. R. Anthony.....Griffin	J. M. Thomas.....Griffin
Stephens	Jeff Davis.....Toccoa	C. L. Ayers.....Toccoa
Stewart	R. L. Grier.....Lumpkin	M. Walton.....Lumpkin
Taliaferro	J. A. Rhodes.....Crawfordville	L. R. Brown.....Sharon
Terrell	J. T. Arnold.....Parrot	C. T. Kenyon.....Dawson
Thomas	W. W. Jarrell.....Thomasville	Harry Ainsworth.....Thomasville
Tift	W. H. Hendricks.....Tifton	L. A. Baker.....Tifton
Toombs	H. M. Meadows.....Vidalia	T. C. Thompson.....Vidalia
Tri	H. L. Carroll.....Babeock	C. K. Sharp.....Arlington
Troup	F. M. Ridley, Jr.....LaGrange	John Banks.....LaGrange
Walker	J. M. Underwood.....Lafayette	J. H. Hammond.....Lafayette
Ware	J. C. Rippard.....Waycross	T. J. Carswell.....Waycross
Warren	G. R. Maner.....Warrenton	R. D. Nash.....Norwood
Wayne	J. G. Tuten.....Jesup	E. C. Crummeey.....Jesup
Wilkes	A. W. Simpson.....Washington	O. S. Wood.....Washington
Worth	W. C. Tipton.....Sylvester	J. L. Tracy.....Sylvester

Journal of the Medical Association of Georgia

W. C. LYLE, M.D., Editor - Augusta, Georgia

THE IMPORTANCE OF THE OPHTHALMOSCOPE IN PREGNANCY*

Dr. Dunbar Roy, Atlanta

The writing of this article was prompted by a discussion which occurred at a meeting of the Fulton County Medical Society several weeks ago, at which time the question of urinary examinations in cases of pregnancy was very freely considered, and in the second place, from the fact that the personal observation of several cases of albuminuric retinitis in pregnancy during the last year or two has impressed upon me the importance of its early recognition by the obstetrician and a proper consideration of its gravity.

Albuminuric retinitis occurring in the puerperal state has never been considered as grave a condition as when it occurs in the so-called chronic Brights disease, and yet it is of sufficient gravity to warrant active measures and remedies being used to check if possible its deleterious results.

From the standpoint of the ophthalmologist, I believe that the physician who has charge of the pregnant woman, should make it a routine practice to examine thoroughly and continuously the urine of the patient throughout the puerperal state.

By thoroughness, I mean both chemical and microscopical, using every means at his command for this examination, and especially in estimating the amount of solids. By continuously I mean from the very time that the physician's services are engaged, to a month or two after the birth of the child.

Obstetricians and physicians are too prone to consider the innumerable eye symptoms which arise in the course of the puerperal state as of slight importance, failing to realize that many of the same are the harbingers of a later trouble.

There are two serious conditions that

are liable to occur in the eye during the course of the puerperal state where there is a toxemia from the kidney and liver inactivity. The first is a retinitis albuminurica similar to the same form as it occurs in chronic Brights. Secondly, neuritis and retro-bulbar neuritis as a result of the same toxemia. Fortunately for the race of womankind, the occurrence of retinitis or even neuro-retinitis during the course of pregnancy is by no means frequent. Unfortunately for the same class, there is no way of telling when this complication is likely to arise, save from the fact that we know there is a possibility of such an occurrence, should an examination of the urine reveal some pathologic conditions of the kidneys.

Statistics have shown, and the observation of various writers also corroborate the fact that retinal lesions rarely occur without the kidneys first showing some diseased condition, and it is for this added reason that a close examination should be kept over the condition of the urinary apparatus.

What are some of the symptoms which should indicate to the physician that the eye of his patient should be examined? These are varied, and yet most of them suggestive. Headache or brow-ache; nausea and vomiting; flashes of light before the eyes or dark spots be seen when look at a bright wall; sudden loss or diminished vision; dilated pupils; oedema of the lids in the early morning.

These symptoms may be present at any time during the puerperal state, which in itself must require eternal vigilance. To my mind, however, the most pathognomonic symptom is that continuous dilated pupils with sudden and intermittent loss of vision. If such symptoms as these exist, it is absolutely imperative upon the physician in charge to have an immediate and thorough ophthalmoscopic examination made. As was previously stated, the two lesions of the eye which are liable to

*Read at meeting of Medical Association of Georgia, Augusta, April, 1912.

occur, are the retinal and optic nerve. The retinal lesion when it occurs shows the characteristic appearance of the so-called retinitis albuminurica.

That the optic nerve sometimes becomes involved is also well known. According to Groenouw the optic nerve may show a neuritis or a retro-bulbar neuritis during the course of pregnancy. For instance, Uthoff found 4 of 66 cases of chronic retro-bulbar neuritis to occur in women in advanced pregnancy. Other cases have been published by Kipp, Valude, Power, Lawford, Knapp and Ole Bull.

Groenouw says that the transient loss of vision in these cases cannot be regarded as uraemic or hysterical amaurosis, but rather due to a neuritis secondary to auto-intoxication. Dr. Arnold Knapp has reported before the American Ophthalmological Society three cases of neuritic atrophy with no other changes in the eye grounds in pregnant women with other manifestations of toxemia. They are so interesting that I report them in detail.

Case 1—Mrs. R. F., age 32, seen July 13, 1906.

Patient gives a history that she has had five children in a period from eleven to five years ago. She then had four abortions. She is now in the eighth month of pregnancy. Seven weeks ago suffered from severe headache and vomiting. Five weeks ago the right eye became blurred, which was shortly followed by an involvement of the left, and in one week both eyes were blind. She has had no convulsions. The headache and vomiting have ceased. Urine examination shows specific gravity 1020; faint trace of albumen; proportion of urea nitrogen greatly reduced. On examination: Both pupils widely dilated and immobile; no perception of light in any part of the field. Both optic discs are white; outlines indistinct. Arteries narrow. There is some oedema of the retina in the muscular region. On July 20, labor was induced, and a dead child delivered. Mother died of septicaemia.

Case 2—Lying-in-Hospital. October 4, 1904.

In preceding pregnancy there was loss of sight becoming worse after labor three

weeks, then improved, but complained of asthenopia. At present in eighth month of pregnancy, complains of blurred vision. Albuminuria. The optic nerves are white and ill-defined. Field normal.

Case 3—Seen at the Lying-In Hospital, August 12, 1904.

Primipara. Three months ago her vision was blurred for two weeks. She then had headache. Now near term. The legs are swollen; the urine contains some albumen; optic nerves are distinctly white. Right; blurred, nasal half swollen. Left; flat; vision and field normal. I have personally seen three other cases of optic atrophy which started during the puerperal state, and which was complete three or four months after the birth of the child. While the prognosis in cases of albuminuric retinitis and optic neuritis of pregnancy is more favorable than that which occurs in chronic Brights, it is still grave enough to warrant its serious consideration when it does occur, and if necessary consider rather the mother's condition than that of the unborn child.

This statement is also true both in relation to vision and to life. In the form of albuminuric retinitis it is a well known fact that the eye lesions not infrequently disappear almost entirely, and normal vision once more takes place. The great trouble seems to be that there is never any way to tell just which cases will make this most satisfactory recovery.

Culbertson from some collected statistics makes the following statement as to the results deduced: recovery of full vision is about 16 per cent., recovery of partial vision in 58 per cent, blindness in 25 per cent.

Silex reports twenty-six cases which he had been able to follow; of these eleven recovered vision 1-6; five were almost blind.

A very favorable case recently came under my care. Mrs. W. L., age 41, gave birth to a child the latter part of May, 1911, she consulted me on June 5th, with the following history: Two weeks before the birth of the child, her vision became dim. Her physician reported that there was no trouble with the kidneys, and no

further attention was paid to this feature of the case. After birth of the child, her vision still remained dim, but no trouble could be discovered by the urinary examination. On ophthalmoscopic examination, I found the retina in the region of the macula on both temporal sides covered with typical albuminuric retinitis patches and discs were very pale. She then consulted another physician, who after a thorough examination discovered some casts. She was placed on proper dietitic treatment, but improvement did not really begin until the iodide of potash was given. When last seen the vision was almost normal, and the patient seemed progressing to a perfect recovery.

With such an uncertain prognosis, and with the balance in favor of a bad prognosis, it is certainly incumbent upon physicians to recognize the seriousness of this complication. The writer has no definite comparative statistics upon which to base his opinion, but from a study of the literature, and from some personal observations, I believe that induction of artificial labor is demanded when there are severe lesions in the eye such as albuminuric retinitis and neuro-retinitis.

There have been many cases reported where the eye symptoms rapidly disappeared after the induction of labor. Silex, Snell, Alt, Culbertson, and others, have published papers upon this subject, and Silex from a vast experience advises in nearly all cases in which albuminuric retinitis develops during pregnancy that premature labor should be induced. This method of procedure is absolutely necessary if the retinitis of pregnancy should develop where there is a distinct history of chronic Brights. This is well exemplified in a verbal statement made to me by Dr. George H. Noble.

He had four cases where albuminuric retinitis developed in the course of pregnancy where there was also the history of chronic Brights. He recommended premature labor in all four cases. Three refused and died, while the fourth had the uterus emptied and recovered with good vision and her life. The report of such cases is certainly food for thought. In

conclusion, I realize that such a paper as this is far from complete and exhaustive, but that the subject is important and timely, we all must admit. If I can arouse a spirit of more thoroughness on the part of physicians, in considering the ocular symptoms during the pregnant state, I shall feel fully repaid even for the incompleteness of this article, for I am fully convinced that practitioners and obstetricians have never rightfully considered the importance of this subject.

CORRETTAGE OF THE PHARYNX IN ADULTS*

Maury M. Stapler, M.D., Macon

Within the past few months the diagnosis of diseased conditions of the post-nasal space known as the pharynx has been materially advanced by the perfection by Drs. Sidney Yankauer and E. M. Holmes, of mechanical appliances whereby it is possible to get a direct view of every part of the pharynx.

It is now no longer necessary to treat this locality empirically. Being able to look directly, it is possible to curett and apply medication to diseased tissue only.

With the post-nasal speculum of Dr. Yankauer, one may apply medication with a straight applicator directly to the mouth and inner lumen of the eustachian tubes and with the naso-pharyngoscope of Dr. Holmes it is possible to see these tubes in the performance of their function and decide to what extent they are responsible for disturbances in this neighborhood. With either instrument a view of the fossa of Rosenmuller may be had. In fact the pharynx may now be minutely and critically inspected in every detail and remedial measures applied. Of how great value this is, we may judge from the following statement of the important anatomic relations the pharynx bears. Royet says in scarcely any other part of the body can so many important structures be found grouped in so small space and in close relation to a mucous membrane liable to

*Read at meeting of Medical Association of Georgia, Augusta, April, 1912.

constant irritation and chronic inflammation. In close proximity are the Eustachian tubes, the carotid artery and the jugular vein, the pneumogastric nerve, the sympathetic nerve, the glossopharyngeal, hypoglossal and spinal accessory, and not far away are the cervical lymph glands, the parotid gland and the facial nerve. In addition there are the extensions of the mucous membrane. The fossa of Rosenmuller is so arranged that if inflamed its mucous membrane is likely to swell and form a pouch closed at the bottom in which normal and pathologic secretions will accumulate. The swelling of the mucous membrane if chronic is likely to bring the two folds of mucous membrane together in such a way that they become adherent and form a closed sac which may retain for a considerable time the products of inflammation. This accumulation of pus may affect the neighboring parts of the pharyngeal mucosa and the adjacent nerves and lymphatics. The depth of the fossa of Rosenmuller is very variable in different subjects. Not only does the stagnation of pus in this cul-de-sac cause a constant chronic irritation of neighboring parts, but it is the source of numerous relapses and of aggravating affections that would be otherwise slight and transient. Royet enumerates the following symptoms which may result from inflammation in this neighborhood:

Symptoms resulting from the affection of the nasopharynx itself—Headache, mental dullness and inattention, lassitude, asthmatic attacks, nasal hydrorrhea, collections of mucus in the pharynx, nervous cough. Symptoms referable to the ear—Subjective noises, deafness, sensitiveness to noise, vertigo and loss of equilibrium.

Symptoms referable to the tissues adjacent to the pharynx:—Interference with circulation by pressure on the carotid or the jugular is a possible result, but Royet thinks that such changes could be explained by the action on the nerves, inflammation in the lateral part of the nasopharynx may cause, according to the author, insomnia, tachycardia, palpitation, intermittent pulse, emotional outbreaks the result of the irregularity of the heart, sen-

sation of anxious expectation often felt between the emotional paroxysms, digestive troubles, neuralgia, motor and sensory neuroses of the pharynx, etc.

Not only does an affection of the lateral part of the nasopharynx explain the greater part of symptoms usually referred to neurasthenia, but it explains also their variable character. The patient who is too weak to walk will under excitement perform tasks requiring considerable muscular strength. The sudden disappearance of the nervous symptoms is also easily understood.

Here several signs should excite suspicion of these lesions: Lateral pharyngitis, a granular condition of the pharynx, the symmetrical contraction of the velum palati, pain on pressure in the retro-maxillary region, previous or present recurrent attacks of pharyngitis, cervical adenitis, all the symptoms referable to the ear.

A. Hecht calls attention to catarrh of the nasopharynx as a cause of intractable cough as well as the source of infection of the middle ear: the larynx, bronchi, and even the lungs. The secretion from the nose and pharynx in infectious diseases run down the back wall of the pharynx especially when the person lies on the back in sleep, comes in contact with the larynx and sets up the tendency to cough.

There is possibly no one objectionable condition so universal in the present generation as the necessity to clear the throat by hawking and spitting. The layety call the secretion catarrh. It is the result of a diseased pharynx and should be corrected. All the foregoing symptoms and diseases, when due to left over adenoids and diseased pharyngeal tonsils are curable by curretage of the pharynx followed by treatment applied directly to the diseased localities. When curretage of the pharynx is needed and properly performed the good effects show promptly upon the patient. In those cases where the general practitioner finds no definite organic affection, where the patient is anaemic and below normal in weight and does not respond to tonics, I invite him to examine the pharynx, for therein lies a multitude of reflex anomalies.

Curettage of the pharynx in adults can usually be accomplished by the use of local anaesthesia. In cases where the ears are involved and the patient is under thirty-five years of age, it is probably best to give a general anaesthetic and take time to explore the field thoroughly with the finger after the operation is finished. The danger from hemorrhage is practically nothing and the after pain and discomfort is very little. Except to see that there are left no tags of shredded tissue there is no necessity to detain the patient. Cold water gargles, with listerine and iced drinks is probably sufficient after treatment in the great majority of these cases.

Curettage of the adult pharynx shows favorable results comparable with curettage of the uterus and the general practitioner should give this locally more consideration than he has characterized the practice of the past.

"THE EXTIRPATION OF THE LACHRYMAL SAC IN CHRONIC DACRYOCYSTITIS"*

F. Phinizy Calhoun, A.B., M.D., Atlanta

In considering the complete removal of the lachrymal sac, as the title of the paper implies in chronic dacryocystitis, a knowledge of the surrounding anatomy is necessary in order that one might appreciate any discussion on the subject. I therefore take the liberty of presenting a few elementary facts in the anatomy of the lachrymal apparatus.

The lachrymal apparatus consists of two parts, the secretory, the lachrymal glands; and the excretory, the lachrymal passage.

The glands, (one large and one small accessory gland) are situated in the bony fossa in the outer and upper angle of the orbit and by the excretory ducts, they empty their contents into the outer half of the superior fornix of the conjunctiva. These glands receive a nerve stimulus from the lachrymal branch of the ophthalmic division of the trifacial nerve, which with the nasal branch of the same nerve and the

ciliary ganglion, they supply the cornea, the conjunctiva and the excretory passage.

The excretory passage first begins with the lachrymal puncta, two small openings on the free border of the upper and lower lids near the inner canthus. The puncta lead into converging canals, (canaliculi) which in turn empty into the lachrymal sac, situated in the inner angle of the eye, in a cleft which the lachrymal bone forms for its reception. The lachrymal bone bounds the sac nasally, while temporally and above it is closed by the internal palpebral ligament, a most important structure in determining the position of the sac.

Where the bony cleft of the lachrymal bone merges into the bony canal, the lachrymal sac passes into the lachrymal duct. Here we find the narrowest part of the lachrymal canal, and at this point pathological changes (strictures) most frequently occur. From this point, the duct passes downward, backward, outward and empties below the inferior turbinal bone into the nasal fossa. At this point, there is usually a large plexus of veins, another site for pathological changes.

The mucous membrane of the sac and the duct is continuous, and these structures are distinguished by the fact that the sac lies against the bone only on one side and elsewhere it is free, whereas the duct is completely closed in a bony canal.

For these reasons any swelling or distension from fluid of these two parts could be recognized only in the sac. The duct cannot be distended on account of its bony walls, and it is a favorite site for constriction, whereas the sac does become distended and constrictions do not occur except in cases of long standing.

The immediate cause for a chronic dacryocystitis is a stricture of the nasal duct and it usually develops from an affection of the nasal mucosa. This mucous membrane inflammation may begin with an acute coryza, or the rhinitis may become chronic as in the intumescent or hypertrophic form, or even progressing to the atrophic stage, an ozena may develop, and by continuity of structure, these changes

*Read at meeting of Medical Association of Georgia, Augusta, April, 1912.

involve the nasal opening of the lachrymal duct and finally the duct itself. In time cicatricial changes take place in the duct or about its opening and a fibrous stricture forms, and the cause of dacryocystitis is even more obstinate.

When the stricture forms and it may be an acute swelling or cicatricial changes, the tears can no longer drain into the nose, and as tears are always forming and are constantly forced by the act of winking into the sac, it becomes filled and ultimately distended. Micro-organisms of all description (especially the pneumococcus) being washed into this sac by the cleansing process of the tears, find a good breeding ground in the decomposed material, and it is this decomposed fluid which irritates the mucous membrane of the sac, which inflames and throws off a pyoid secretion which mixes with stagnant tears. This new secretion closely resembles pus, and the eyeball is constantly bathed in this fluid.

Briefly mentioned, the foregoing is the anatomy of the lachrymal apparatus, and the etiology of lachrymal obstruction causing chronic dacryocystitis. Why then is such a condition serious and why does it demand surgical interference?

First, there is a constant overflow of tears, (epiphora) which is an annoyance. This symptom might be the only discomfort to the patient and is the only symptom in a catarrhal inflammation of the lachrymal duct. However, from this might develop the purulent form.

In the purulent form, the eye is constantly bathed in a fluid, fairly alive with bacteria; this induces a chronic inflammation of the lids and conjunctiva, which, in turn, excites a greater activity of the lachrymal gland. Any injury to the cornea like a simple foreign body would almost certainly result in a violent ulcer, and in many cases the ulcer leads to the destruction of the eye. In long standing cases of chronic dacryocystitis in which there is an atony of the walls of the sac, there forms from an over distension of the sac, a tumor often as large as a walnut which projects far forward or often deep into the orbit, which might cause an ex-

ophthalmus. This swelling is given the name of hydrops of the lachrymal sac.

In considering chronic dacryocystitis, three forms are recognized. First, the catarrhal type, in which there is only an epiphora: Second, the purulent type, having epiphora and the formation of a pyoid material: Third, the abscess type, or more properly an acute exacerbation of a chronic dacryocystitis. At present I am not convinced that the extirpation of the sac is the conservative treatment for the first classification, hence this paper deals with the two latter types.

Ophthalmic surgeons are at such variance in the manner of treating chronic dacryocystitis of the second and third classification, that my views on the subject, while they might seem radical to some, I believe in the interest of the patient, they are really the most conservative.

The usual manner of treating a chronic dacryocystitis has been the slitting of the lower canaliculus with a knife, passing it into the sac, then through the stricture, and trying to keep the duct patent by gradual dilatation with conical sounds. It is needless for me to say that the nasal cavity receives its proper care and treatment. The duration and success of the treatment with sounds, depending upon the nature of the stricture, usually requires many months. Such or with certain modifications, is considered the conservative treatment of chronic dacryocystitis.

After an experience of some few years, (not a half or a third of the time of many of my confreres present), with this so-called conservative method, I have almost entirely abandoned the procedure, except in some very, very few selected cases, and from the very beginning I now extirpate the sac. The cases that I treated so-called conservatively, that is by the probe method, have with but few exceptions, required a sac operation for a permanent cure.

Basso, an Italian surgeon (*annali di Otolomologia* xxxiv, 3-4) removed the lachrymal sac in forty-one cases, and microscopically the condition of the sac was as follows: First, simple stenosis without

true cicatricial obliteration 22 per cent; second, obliteration at the superior strait with patency below 8 per cent; third, inferior obliterations with more or less involvement above 40 per cent; fourth, total obliteration 30 per cent.

Microscopically, in the cases of the second and third classification which I mentioned, there was great deformity of the sac from distention and smallness of the canal. The canal was usually obliterated. The epithelial lining of the sac was destroyed or a hyperplasia existed, and the tunica propria was substituted by a granulation tissue, rich in blood vessels, which formed large polypoid prolongations and villousities. The degree of pathological changes depended very much on the duration and the character of the infection, that is whether of the catarrhal, mucoid, or purulent (abscess formation) type.

These pathological findings by Basso, shows how tedious, if not impossible, in some cases the process of probing must be to perfect a cure. After all, it is ones experience which teaches whether the sac should be removed.

The indications for this removal, as I see them, are as follows:

1. The unwillingness or the inability on the part of the patient to submit to a long course of the probe treatment; a timidity on the part of the patient that would likely render the probe treatment unsuccessful.

In all clinical cases of chronic dacryocystitis of the second and third classifications, where probing could only be continued for a very brief period; these cases are in the poorer laboring classes, and good eyes are as essential as good hands. According to their occupation, they are often most liable to have trifling injuries to the eye and with an accompanying dacryocystitis, a serious infection of the cornea is a most probable complication. With the removal of the sac, such a liability would be lessened.

In addition there are certain occupations which increase the liability to eye injury, as brick masons, stone cutters, machinists and the like, and even if they had

the desire to submit to probe treatment, I should advocate the removal of the sac,

2. Evidence or history of previous attacks of phlegmonous, or acute dacryocystitis.

3. In the presence of any indications for any operation on the globe, and especially a cataract extraction.

4. An ulcer of the cornea caused from dacryocystitis, which resists all forms of treatment.

5. Finally after a reasonable length of time those cases which have had the probe treatment and a failure results, the sac should be removed.

The technique of operating in these cases is so well known to ophthalmic surgeons that I will only briefly mention them. That which I have adopted does not differ materially from any of the usual ways.

I usually perform my operation under a local anaesthetic, using subcutaneously and plunging the hypodermic needle into the sac, a few drops of an equal part of 2 per cent cocaine and 1-1000 adrenalin solution. The operation is almost without any great pain, and unless the angular artery (a branch of the facial) is severed, there is but little hemorrhage. An incision over the sac is made and with a Muller retractor, the skin is held apart. After a careful dissection the sac is removed from its bed, and then it is thoroughly examined to see if any part of its wall has been left. The cavity should be thoroughly cleansed of all mucus membrane, else the operation will be a failure. The cavity is curetted as well as the duct, and I usually denude the bone by pushing the mucus membrane forward with a large probe, until it reaches the floor of the nose. The wound can be closed by three small silk sutures, a small iodoform pad placed over the wound, then a firm dressing of gauze and cotton applied to obliterate all dead space. It is usually dressed on the third day to make the patient feel more comfortable, and the sutures are removed on the fifth day. Within ten days the linear scar is only perceptible, and one month later it is hardly discoverable.

There are accidents and complications which might arise and embarrass an opera-

tor. An incision of the branch of the facial artery might cause a troublesome hemorrhage; by pressure or with an artery clamp it can be controlled. If the sac is greatly distended with fluid or pus, one might burrow into the orbital cavity and if the sac is ruptured, an orbital cellulitis might subsequently develop.

The use of paraffine or liquids to distend the sac and outline its walls, I think unnecessary, as it might cause complications.

Failure of primary union or a breaking down of the wound are unpleasant complications: they will greatly delay healing and usually leave a noticeable scar.

The operation in experienced hands, by one who understands the anatomy of the parts, is easily and quickly performed, often not requiring more than twelve minutes in simple cases.

The natural question which arises after the removal of the sac, is what becomes of the tears. That there is a marked diminution in the flow after an operation cannot be denied, although the exact way in which this phenomena takes place has not been definitely determined. Bearing in mind that the nerve supply of the gland, the passages and the irritated region (the conjunctiva and cornea) is from the same source, it is natural to suppose if we remove a source of constant irritation, that is an inflamed lachrymal sac, we rid the whole lachrymal system of the previously existing irritations.

My results consist of twenty-five operations on twenty-four individuals; both sacs were removed in one case. All but one, were adults and that case a child, age seven years, who gave syphilitic manifestations. He had a purulent rhinitis and recurrent attacks of lachrymal abscesses. The operation was performed with difficulty, under an anaesthetic and there was subsequently an infection of the wound, and it required several weeks to perfect a cure. A letter from the child's doctor a few weeks ago tells me that he has not had a recurrence of the trouble, but as a result of necrosis of the nasal septum (undoubtedly syphilis) there is a marked nasal deformity.

A general anaesthetic was administered in but four cases, one a child, two extremely nervous women, and one a very complicated case with a lachrymal fistula which would not close.

In no case where the operation was done under a local anaesthetic was the pain as great as if the probe operation had been performed. Any chronic conjunctivitis from the lachrymal discharge or excessive tearing, should show signs of improvement within two weeks.

The permanent results in this series are gathered from letters sent to patients requesting them to answer the following questions. They, with the answers were received from sixteen cases, and are as follows:

1st. Has there been any subsequent inflammation? "Yes," 1; "No," 13; Doubtful, 2.

2d. Is the tearing as copious now as before operation? "Yes," 5; "No," 11.

3rd. Has the operation benefited you? "Yes," 16; "No," 0.

Ninety per cent. is a conservative estimate in this series, that complete cure has resulted. I believe same percentage of failures would also have been conservative, had the probe treatment been instituted.

FOLLICULAR CONJUNCTIVITIS.—ITS RELATION TO ADENOIDS*

T. E. Oertel, M.D., Augusta

Follicular Conjunctivitis is one of the most common maladies affecting the eyes of children. Fuchs describes it in the following terms:

"Follicular catarrh is characterized by the presence of **follicles**. These are small round granules of about the size of a pin's head, which lie in the region of transition of the conjunctiva. They are of a pale, translucent aspect and puff up the conjunctiva in the form of small eminences. Either a few follicles only or many are present; in the later case they are ordinarily arranged in rows like the beads of a rosary. Microscopic examination shows

*Read at meeting of Medical Association of Georgia, Augusta, April, 1912.

that the follicles, as well as the so-called trachoma granules, consist of a circumscribed accumulation of adenoid tissue.

"Follicles are most frequently observed in youth, and can accompany both acute and chronic catarrh. Their significance consists in the fact that when follicles are present the malady is a protracted one. In chronic cases, the follicles remain stationary in the conjunctiva for a series of years. The follicles ultimately disappear without leaving a trace behind; the disease, therefore, in spite of its long duration, has a good prognosis, in that it is cured without leaving any sequelae. In this particular, follicular catarrh is essentially distinguished from trachoma, which in its external appearance bears a great resemblance to it, but which, however, always leads to permanent changes in the conjunctiva."

All of the text books and monographs at my command agree that the gross and minute appearance of follicular conjunctivitis and trachoma are identical and that diagnosis must often rest upon the ultimate outcome of the case.

The etiology of follicular conjunctivitis is entirely uncertain. By some it is considered to be mildly contagious on account of the fact that often children of the same family or those brought together in orphan asylums and schools are simultaneously afflicted with the disease. This is taken to warrant that it is transmitted from one to the other.

It is also generally pointed out that unhygienic conditions are conducive to it, and Ball says, "The disease, however, is often found in individuals who have enlarged cervical, femoral, or axillary glands, hypertrophy of the tonsils, adenoid growths in the pharynx, granular pharyngitis and swollen gums. The conclusion seems evident that folliculosis is to be regarded as an expression of adenoid activity incident to childhood and youth."

The cause of such adenoid activity he does not elucidate.

The object of this communication is to point out what I believe to be a causal relation between adenoid hypertrophy of the laryngeal lymphatics, to so-called ad-

enoids, and adenoid hypertrophy of the lymphatic follicles of the conjunctiva.

I regret that I have kept no accurate record of cases noted. For some years past, however, I have observed the frequent if not the constant simultaneous hypertrophy of the lymphatics of these two regions. Frequently, I have astonished the parents of a child or the students at a clinic, by making a diagnosis of **adenoids** and probable hypertrophy of the faucial tonsils upon everting the lower lid of the patient and seeing the characteristic granules of follicular conjunctivitis.

I believe it is not too much to say that in all cases of severe folliculosis of the conjunctiva in childhood not brought about by irritants applied to the conjunctival sac—atropine, esserine, and the like—examination of the throat will reveal the presence of adenoids and often of hypertrophic faucial tonsils.

Such an observation, if true, must be of interest as pointing towards an intimate relation and connection of these structures. While it is well known that there is free and complex anastomosis of the lymphatic vessels connecting the lymph nodes of the head, it would seem that those of the eye being **superior** and the drainage being **centripetal** the lower structures could not affect those lying above them.

While we may argue that a bacterial infection might grow upward against the lymph stream and thus from the tissues of the pharynx reach the conjunctivae, this is not a reasonable hypothesis as such progression of infection is certainly unusual while the conditions under consideration are so common; nor is the infectious nature of follicular conjunctivitis and adenoids proven.

Probably it will occur to you that the lymphoid hypertrophy of the throat and the conjunctiva are due to some extrinsic cause which is a common excitator. We are, however, confronted by what seems to me a most interesting fact, namely: that if the throat is cleaned out by operative removal of the adenoids and hypertrophic faucial tonsils the follicular conjunctivitis will usually promptly disappear with-

out medication. If, on the other hand, the throat is **not** operated upon, even persistent treatment by the use of approved methods may fail to produce any effect upon the conjunctival condition.

It would seem that this proves either that the pharyngeal condition is a direct causative factor of the conjunctival lymphatic hypertrophy and its continuance in some way not yet clear or that possibly the general well-being of the child resulting from the removal of the offending adenoid tissue in the throat may tend towards relief of the conjunctival condition. This latter view does not appeal to me for the reason that the effect produced in the conjunctiva is often obvious within a few days, even before the throat wounds have healed and certainly before the child **can have had** its general nutrition appreciably affected.

However interesting speculation along along these paths may be, we may, I think, safely adopt this practical dictum; follicular conjunctivitis indicates hypertrophy of the lymphatics of the pharynx and fauces. Removal of the offending tissues in the throat will result in the spontaneous cure of the follicular catarrh of the conjunctiva.

Observation covering a period of years confirm me in these conclusions.

NOSE AND THROAT REFLEXES CAUSING COUGH*.

Richard R. Daly, M.D., Atlanta

Cough is a forceful expiratory explosion with greater or less closure of the glottis and preceeded by inspiration. Its mechanism includes all the expiratory muscles, the recti, obliqui, and transversales abdominis, the erectores spinae, serrati postici and quadratus lumborum together with those actuating the glottis and vocal cords constituting a complexity of activity difficult to realize. It is admirably described by Cohen in the last Bucks Handbook. It is not my purpose to go over this ground in detail but instead to study some of the

less frequently considered conditions that set this mechanism at work and present cough as a distressing and baffling symptom.

Inasmuch as cough usually expells mucus from the air passages and since those usually emptied are the bronchi, trachea and larynx, we commonly expect to find the cause in some one or more of those localities. We learn to distinguish certain kinds of cough by their sound and are led in our search for their meaning to look at once either high or low in the breathing tract. The copious expectoration following cough in the broken down tubercular lungs tells its own story; the dry sudden cough of a tickled larynx is equally clear, while bronchitis and pneumonia rarely lead us astray. Asthma heralds its presence before the cough comes and emphysema needs only a little differentiation. In short we learn to look at once for certain seats of the coughing impulse and have accustomed ourselves to finding them in the respiratory tract somewhere below the mouth.

The general practitioner may satisfy himself, as a rule, that he has found the difficulty there, or if he looks into the mouth and sees an elongated uvula or enlarged wabby tonsils, he is pretty likely to conclude that his search is over. Let us add to this group some notable stenosis of nasal breathing and say that nasal polypi are discovered, or even that one looks into the ear and sees impacted cerumen the manipulation of which causes cough.—then what more is there to do?

Each and every one of these is just as important as anything I am about to present and I would not minimize them by an inference to the contrary. Some of them may be overlooked at times and if so, let me include them in the group I would put before you as worthy of your attention.

Whatsoever may be the exact innervation of the mechanism of cough, we know that it can be set in motion by irritations almost anywhere in the whole respiratory tract and in some places outside of it such as the external meatus of the ear. Certain conditions of the digestive apparatus and even tickling of the abdomen have caused it. That there is a cough center in the

*Read at meeting of Medical Association of Georgia, Augusta, April, 1912.

medulla seems to be certain and that the vagus and phrenic nerves deliver the messages beyond question. It would be interesting to work out this attractive subject but the practical clinical matters are to have our present attention.

A patient presents himself suffering with a bad cough. What is to be done about it? Auscultation tells of roughened breathing here and there and the cough itself sounds tight or loose. The good old way in the good old days, which we can be deeply thankful are getting farther and farther away, was to give an expectorant or anodyne, prescribe a cathartic and possibly put the patient to bed. He was told to eat plentifully on the principle of "feed a cold and starve a fever" and to return for further advice when he needed it. Of course, pleurisy and pneumonia were excluded.

Now we follow different lines and not only consider the matters mentioned above but examine the larynx, fauces, naso pharynx and nares.

The cough that originates near the seat of the explosion or within the apparatus of the mechanism, while as a matter of fact, a reflex condition as much as any other, still seems to be a direct result—an immediate effect.

One is likely to look for direct and close relation between cause and effect and if rales, rough breathing or any signs of inflammation or hyperaemia are present within the area, his conclusion as to immediate cause seems rational and careful, even if subsequent events may show he had confused a post hoc with a propter hoc—had antecedent and consequent for cause and effect.

The reflex coughs I have in mind have their origin outside the coughing mechanism.

There is a peculiar sudden little cough coming just as one goes to speak that is often obscure in its origin and resistant to immediate treatment. It is embarrassing to the patient and is sometimes attributed to bashfulness or nervousness because no other distress is present. Its interruption of the beginning of a statement often causes the would-be speaker to leave the

conversation to others. I refer to the cough resulting from enlarged lingual tonsils. These little tumors are large enough to hold a drop or two of saliva among them and to overlap the edge of the epiglottis when in the extreme backward excursion at the inspiration that preceeds speech. These tonsils form a part of the tonsillar ring that sets obliquely across the pharynx, the other parts being the faucial tonsils and Luschka's tonsil in the naso pharynx. They often persist in adult life and are easily seen with the laryngeal mirror.

I had a lady of 25 suffering with this difficulty, who was convinced of the etiology when I showed her she could speak without coughing if she were careful to refrain from preliminary inspiration. Cutting them off is a simple and effective remedy though a sore tongue for several days is a sequel.

A curious cough came to my attention several weeks ago in a little child at my clinic. She was a mouth breather of an exaggerated type, but the dry air in the larynx seemed insufficient for the symptom of distressing gagging and swallowing that accompanied the explosions. The fauces were very hyperaemic and she was sent in beetuse of "sore throat." With my finger I discovered a long nodule-shaped tumor extending backwards from the palatal veil into the naso pharynx. I gave her chloroform and with a sharp Kirstein curette, I cut the tumor flush with the posterior surface of the veil. It was fibroid in character. The cough and mouth breathing have entirely disappeared.

The relation of adenoids to cough has been studied so frequently that I mention them only to say that whenever one is present in sufficient size to obstruct breathing or in any other way to make its presence known, it should be thoroughly and promptly removed. The adjacent fossae of Rosenmueller are sometimes filled with small glanular growths. Their secretions and their contact with the protuberances of the Eustachian tubes may cause cough. A finger covered with firm gauze and thoroughly curetting these areas will work seeming miracles at times.

The faucial tonsils play their part in

causing reflex cough. They are so easily seen and frequently studied that I pass all but two of their lines of activity. One is the tickling of the posterior pharyngeal wall when they are pendulous and thus starting a reflex cough. The other is the pushing upward of the base of the supra tonsillar fossae when the tonsils are high and submerged thus causing a reflex from the area just below the prominences of the Eustachian tubes. In both of these there is likely to be no hyperaemia though the cough may be habitual.

Another factor entering into naso pharyngeal cough is the polyp. This may hang down from the body of the ethmoid and be unsuspected even after anterior examination of the nares.

I recall a case of a lady of 34 who had suffered all spring and summer from a most distressing cough. She went to Highlands for treatment and showed so much pulmonary disturbance that phthisis pulmonalis was suspected. Upon her return to Atlanta to make some arrangements for her winter's absence from home, I saw her and discovered a polyp hanging into the naso pharynx from an unseen origin. A cold snare was thrown about it and teased up till I could go no further and the polyp taken away. Her cough stopped forthwith and the pulmonary signs which were caused by the excessive coughing disappeared in a short time.

Coming to the nose itself, we find what are to me the most interesting of the reflexes, possibly because they are the most remote.

Polypi present here. They are readily diagnosed and their relation to cough is usually only that of causing mouth breathing and thus sending air that is too dry and cold over the delicate laryngeal mucosae of the bronchi.

Last spring a little boy of 8 was brought to me having had a distressing cough all winter. An examination of the nose was asked. The septum was swung a little to one side and high up between the mid turbinate and the septum was lodged a shoe button. No one knew how long it had been there. Removal was followed by quick recovery from all trouble.

Posterior hypertrophies of the inferior turbinates cause irritation to the remaining turbinal tissue and hyper-secretion and cough ensue. Sometimes they cause mouth breathing and cough. Their occurrence is frequent enough to warrant keeping them in mind when searching the cause of cough. When found, they should be removed with snare or cutting instrument.

I have just closed a series of 50 cases, the general symptoms of which are as follows: Persistent or frequent recurring cough with variable lung symptoms, coming on more frequently at night and sometimes accompanied with asthma. Occasionally the inspiratory squeak of emphysema presented and nearly always increased symptoms upon lying down.

In each of those cases, I have found greater or less pressure upon septum at the mid turbinal region resulting from a deviated septum, a misplaced turbinate or an angio neuroma of the turbinal tissue. The cough could be induced by stimulating the compressed or contact area. Practically all of those were cured and all markedly benefited by removal of the pressure or contact. Two or three cases will suffice to describe them all.

A lady of 25, pregnant, sought relief from whistling sounds she could hear in her lungs at night; they preceeded cough and had been going on for eight or nine months. As her pregnancy progressed, they made her very nervous. A small angio-neuroma of the middle turbinate was removed with cold snare and all the trouble disappeared. In this case the contact with the septum was slight and intermittent.

A lady of 30 presented herself with signs of chronic bronchitis for which she had long been treated. The left middle turbinate displaced and in hard contact with the septum. The septum in turn was bowed over to the right and pressed the mid turbinate on that side. There was also contract with the inferior turbinate on the left side. In other words, she had a sigmoid deviation of the septum with pressure on both sides above and on one side below. The left middle turbinate was cut away. Two weeks later a submucous resection of

the septum straightened out the sigmoid curves and relieved the mid turbinate pressure on the right side as well as the contact of the left inferior turbinate. In doing this, it was necessary to remove a section of the perpendicular plate of the ethmoid in order to secure relief from pressure. This was done under cocaine and she went home in a street car. The recovery from the operation was uneventful. She has left town entirely free from pulmonary symptoms and cough.

A similar state of affairs existed in a man 35, except that there was disease of the mid turbinal and the ethmoid cells were curretted before the submucous resection of the septum though not at the same sitting of course.

My final case is myself. I know from the saddest of experiences what it has been to suffer with intra nasal pressure in the mid turbinal region. All during the years until last May I suffered with frequent distressing attacks of cough which gradually increased in severity until at one time last winter I was said by one of our best diagnosticians to have emphysema. I never could breathe through both nostrils at once. I saw Dr. Craig at Atlanta, who told me he had had similar trouble. An attack came on and during three whole weeks, I didn't spend five minutes in a recumbent position. Any attempt to lie down was the instantaneous cause of severe asthma. I slept leaning forward on a table. It took all that to induce me to submit to operation. I went to Craig at 3 o'clock one Saturday afternoon and he operated. There was some pain but not enough to detract from my interest in the proceedings and noting the technique. Finally he said "there is one little piece left high up, it is a part of the perpendicular plate." "Get it," I said, "I think that is what we are after." He grasped it and I thought the bottom of the skull had come out. It was not the pain but the shock. However, that passed shortly and the nares were both packed with gauze as is customary. That night with all that packing in, I went to bed and slept. The peculiar character of the contact had gone. He removed the packing next day and be-

yond the slight inconvenience of the healing, I never have had a moment's trouble since. The cough, the asthma, the emphysema, have entirely disappeared.

There can be no doubt that within the nose on the septum near the mid turbinate body there may originate nervous stimuli that result in cough—cough that will persist until these stimuli cease. Contact and pressure cause the stimulation and they are easily seen; they should be looked for in making a diagnosis of cough. As a rule, the treatment is operative.

DISCUSSIONS

Dr. Hugh M. Lokey, Atlanta, believed there were a very large percentage of cases of albuminuric ocular troubles occurring in pregnancy that were not recognized, or not seen at all by an oculist, until it was too late for him to be of much service. He could not recall one case from among the large number that he was engaged to attend who came to him before confinement. Several of these cases he had seen two or three weeks after confinement with well marked albuminuric ocular troubles. A short time ago he had a patient that presented features of special interest to him; he saw this case in Atlanta because of blindness coming on after confinement. The patient had convulsions. After delivery of her baby blindness occurred. The attending physician said there was no kidney trouble present, and even said so after Dr. Lokey had examined the urine with great care and found albumen present. The attending physician said that the patient had had no trouble at all during her pregnancy. He now made it a rule to caution these patients against allowing themselves to become pregnant if it was possible; if they happened to become pregnant he advised consultation with an ophthalmologist. To be sure, some cases might go through one pregnancy and have a great deal of trouble with the kidneys, and yet they might escape such trouble during or after another pregnancy. At the same time if a patient who was in the pregnant state showed albuminuria and passed through her confinement all

right, she should be advised against becoming pregnant again; if, however, she did become pregnant would it not be just to the mother to have a premature delivery or abortion if the condition were discovered in time. In these cases there should be consultations between the physician engaged to attend these women and the ophthalmologist: this would be a great justice to both the mother and the child; such a consultation might prevent a child being born dead or a blind mother.

With regard to dacryocystitis Dr. Lokey believed it to be a waste of time in purulent conditions of the sac to allow the patient to suffer while they attempted to relieve him by the use of probes. Not even from irrigations did they get relief. The ones relieved by probing are simple catarrhal cases.

In discussing Dr. Oertel's paper he said that every case of follicular conjunctivitis he had under observation occurring especially in children, he examined for adenoids, although many of these patients did not have adenoids; however, he made it a rule not to rely upon any operation on adenoids for the relief of the follicular trouble. If there was very much hypertrophy of the follicles he used grattage and expression as in trachoma and followed with irrigations of bichloride of mercury in the strength of 1-5000.

Dr. C. L. Ridley, Hillsboro, said that Dr. Roy's paper was of special interest to him and should be to those who worked in the rural districts. In their obstetric work there they did not have an opportunity to keep in close touch with their patients; not more than ten per cent. (10%) of his patients consulted him before confinement, and this was rather a large percentage. It is very hard in the rural districts to keep track of our patients and to look out for such troubles as albuminuric retinitis. Dr. Ridley said he had two or three of these cases, and one he saw after confinement when the woman had convulsions. Her condition cleared up however after six or eight months. He had seen two other cases at the seventh and eighth months respectively and in both there was no question as to the seriousness of the condition pre-

sented; the vision was very much impaired, there was headache, general oedema, etc. In both these cases he advised the production of premature labor, a plan which he considered to be the safest. If these patients were allowed to continue on to term they did not respond readily to internal medication. He advises ophthalmoscopic examination of pregnant women even if vague kidney symptoms show up, this would often prevent unfavorable results.

Dr. W. B. Hardman, Commerce, discussing Dr. Daly's paper said that the causes of cough in some cases were entirely of a spasmodic nature, probably a habit spasm or tic. He had seen two cases occurring in children and in both he was satisfied that there was some form of tic to account for the cough. He recently saw a case of cough occurring in a child; the patient had a very peculiar cough, very different from the ordinary cough; it sounded more or less like the noise made by a chicken with something in its throat.

Dr. Dunbar Roy, Atlanta, said that the main object of his paper was to call attention to the conditions which possibly might arise during the puerperal state, conditions that physicians, as a rule, did not give sufficient attention to, such as neuroretinitis, albuminuric retinitis, or the conditions which were the results of a toxemia and especially in those instances in which blindness followed. In many of these cases it was absolutely necessary to produce premature labor in order to save sight.

He congratulated Dr. Hull upon what he had said, a report that should be specially commended. In those cases nothing bothered one so much as these malignant growths. Dr. Roy had seen eight cases of sarcoma of the nasal cavity and of the antrum and all had died. He had used the erysipelas toxins but without any results whatever; they all died in spite of everything that was done for them, whether operated upon or not. He was very glad to hear the report made by Dr. Hull which renewed his interest in the subject.

Dr. J. M. Hull, Augusta, believed that what Dr. Roy had said regarding the erysipelas toxins in the treatment of these

cases was very good and appropriate; many times efforts were made to produce some relief in these cases with the erysipelas toxins alone and without success. The percentage of failures while not as large as in other forms of treatment was certainly not as encouraging as they hoped for, after the results that followed the accidental contraction of erysipelas, where there resulted, in so many cases, such good results. Instead of the good results they hoped for from these injections of the toxins of erysipelas there had not yet been recorded such a percentage of recoveries that had followed through accidental infection; in these latter there seemed to have occurred a marvelous result, a complete eradication of the malignant disease, true in both sarcoma and in carcinoma. They were now working with the toxins of erysipelas and the bacillus prodigiosus and were getting as good results as any yet reported. He believed that one of the requirements, one that should be well borne in mind, was that they should employ a fresh solution. He recalled one instance in which this treatment was recommended to a physician in a case of carcinoma of the breast and with poor results; in making the solution for injection the water was sterilized by boiling and while the water was hot it was drawn into the syringe; this of itself killed the efficiency of the solution and therefore did not give good results. Hot water certainly killed the efficiency of the solution. The water which was to contain the solution should be cooled before adding the mixture or before its introduction into the syringe. The reaction occurring from the use of the erysipelas toxins and bacillus prodigiosus, in many cases, was so marked as to be alarming; in some of the cases there resulted a chill in two hours which was followed by a temperature of from 103 to 105 F.

Dr. A. W. Stirling, Atlanta, believed that the most important part of Dr. Roy's paper pertaining to the diagnosis: albuminuric retinitis due to pregnancy was very different from that caused by chronic retinitis where frequently the urine contained no albumin at all. In pregnancy there was generally a large amount of albumin, and, in

these cases, a diagnosis by the ophthalmologist was not necessary. The condition of the eyes was important however as an aid in deciding upon the necessity of bringing on premature labor. The results of an examination by an ophthalmologist might cause the attending physician to decide upon an immediate production of abortion.

With regard to Dr. Stapler's paper—currtage of the pharynx was a very important method of treatment; many adults had adenoids that were shrunken and fibroid. These often needed operation, but he believed that it is better to do this under general rather than under local anaesthesia. By operation only could they expect to obtain a permanent cure. So much operative force was required that the work could not be properly done under cocaine anaesthesia.

With regard to Dr. Calhoun's paper he believed it to be a very important point to decide whether the dacryocystitis was chronic or acute; no one would think of removing the sac when acutely inflamed. He now almost never split the canalicula, but before operating thoroughly tried the injections through the duct of some mild antiseptic. If that failed the removal of the sac was the preferable procedure, but he believed that occasionally the use of the stile might be justified.

Dr. T. E. Oertel, Augusta, said, "The chief purpose of my paper was to call to the attention of the man in general practice the fact that a diagnosis of follicular conjunctivitis should always be followed by a careful examination of the throat and naso-pharynx.

"I think if you will follow this practice you will find in the majority of cases a hypertrophy of the lymphatics of the throat, usually to such degree that operative measures are indicated.

"The text books are quite unanimous in asserting that no scar tissue follows follicular conjunctivitis. With this dictum I cannot agree. I believe the severer cases should be operated upon in order to lessen the danger of scar formation that sometimes takes place if they are neglected.

"If the throat is operated upon the follicular catarrh of the lids will often recover

spontaneously even without medication. It is far better to have an interval of some weeks between the operations.

"The milder cases of follicular conjunctivitis will often recover under the use of a stringent lotions, argyrol, and the like.

"I take this occasion to call attention to the fact that in this part of the country trachoma is very rare. The term 'granular lids' should only be applied to trachoma and should **not** be used as a synonym for follicular conjunctivitis. The later is a simple and mild malady. Trachoma is of the utmost gravity. Looseness of scientific nomenclature is always unfortunate and leads to error."

Dr. R. R. Daly, Atlanta, said that his paper called especial attention to the reflexes that arose from irritations in the nose and throat. There are other irritations causing cough and if a child is suffering with tic of any kind that seems to make him cough, it should be thoroughly investigated and not allowed to go just because a name had been found for the difficulty. Indeed the "tic" itself was a manifestation of a reflex and it together with a cough, might be caused by intestinal worms, spasmodic sphincters, phimosis and the like. When the cough occurred in small children the cause should be untiringly and unremittingly searched for to prevent habit. In adults the cause is probably too remote to be ascertained accurately.

In a series of investigations made some fifteen years ago he examined sixty men all of whom were over 60 years of age and were deaf from no assignable cause. In 95 per cent. of these cases he found the remnants of old adenoids which with their shrinking and adhesions had distorted the ends of the Eustachian tubes. The deafness was doubtless due to these malformations. Even in early adult life these men might have been benefited by careful inspection and treatment such as modern apparatus permits in the nasopharynx.

Repeated attacks of quinsy suggest that the tonsil is diseased. If treatment does not prevent recurrence, tonsillectomy is indicated.

THE IMPORTANCE OF PRESERVING THE INTEGRITY OF CONTIGUOUS STRUCTURES WHEN OPERATING ON THE TONSILS

C. M. Harris, M.D., Johnstown, Pa.

The time was when almost any medical man felt competent to use a tonsillotome in the amputation of offending tonsils, and a fair proportion of patients thus operated on were sure to be disappointed in the results obtained. About ten years ago when dissection and extirpation of the gland were first being practiced in some quarters, the new operation was viewed with much diffidence on account of the danger of hemorrhage and the difficult technic. Now, after the matter has been discussed at great length, and countless demonstrations of different methods have taken place, familiarity has induced many men of varying surgical attainments to attempt the enucleation of tonsils with about the same degree of ardor and indifference which characterized the use of tonsillotome years ago.

The situation today comprises several good simple operative procedures based on correct surgical principles, and any number of fanciful variations amounting in some instances to positive absurdities. In recent years most of the discussion connected with the tonsil and adenoid operation has centered on the indications for surgical interference and how best to remove the organs. Strange to say, little has been said about the postoperative condition of these throats except to report the absence of obstruction, and freedom from inflammation. Supportive treatment before and after the operation evidently has not received the attention it deserves, and thorough preoperative general examination has not been the rule.

It is apparently a fact that lack of skill or total indifference as to the integrity of contiguous structures has been responsible for deficient function of those important muscles which constitute the velum palati. After healing, the results of operative trauma may be seen in some throats. A portion of a faucial pillar or

practically all of it may be absent, and the contracting scar tissue which has replaced it will have drawn the velum to that side, necessarily interfering with the function. In some cases the uvula has been sacrificed. The velum palati is formed by the insertion or blending of the palatoglossi, the palatopharyngei, the azygos uvulae, the elevator palati and the tensor palati muscles; and in itself or through these individual muscles has a diverse action. Deglutition, respiration, phonation and ventilation of the tympanum are all intimately dependent on this group of muscles. During respiration they are all at rest; during the act of swallowing all are in action; and at such times the eustachian tube is dilated through the action of the levator palati and tensor palati.

During the act of swallowing the palatoglossus muscles, which form the anterior pillars of the fauces, contract in such a way as to prevent extrusion of fluids or solids into the mouth, while the palatopharyngeus muscles, forming the posterior pillars of the fauces, assist in performing a similar function for the nose by acting with the other component muscles of the velum, drawing it upward and backward and closing the posterior nares. In speaking, these muscles are used in a variety of ways. Thus it is shown that important structures may be injured (sometimes unavoidably) in removing diseased faucial and pharyngeal tonsils. Mention should also be made of the possibility of injuring the cartilaginous orifice of the eustachian tube or exciting a portion of the superior constrictor muscles of the pharynx.

Admitting that such an operation as the one in question has been faultlessly done, perfect local results are not likely to occur unless the granulating surfaces are frequently cleansed and astringents applied according to judgment until healing is assured. Reduction of exuberant granulations by mechanical means is sometimes advisable.

Such local treatment in small children, especially in the nasopharynx, is an impossibility, but I have always regretted my inability to use it.

Denuded areas in the nose and throat

are always subject to moisture and all sorts of irritants; and nodules of poorly constructed connective tissue or contractile cicatrices may result from improper healing, causing pharyngeal obstruction, impaired muscular action or both. Dr. Pynchon of Chicago early called attention to the importance of postoperative treatment, and some others have emphasized it; but I have reason to believe that it has not been practiced so often as it should be, even in the matter of prescribing tonic and alterative measures.

One has only to follow these cases and observe the fauces with ordinary illumination for confirmation of the foregoing. In studying the nasopharynx with the mirror, the Hays electric pharyngoscope, or through a roomy nose, one may often see tags and nodules of new tissue, which should remove the conceit that we have done a perfect operation. Chronic catarrhal inflammation or actual obstruction may recur in such a case. In referring to obstructive new tissue, I am describing a situation in which absolutely all of the pharyngeal tonsil has been removed at the time of operation.

The defects following these operations are to be deplored, and our efforts should be centered on giving the patient true and proper function rather than simply to rid him of some diseased organs by a procedure which varies in its excellence according to the methods, talents and experience of the operator.

It is my view that many of the aforesaid drawbacks could be avoided by the suggested after-treatment and proper, careful technic in operating. Too little assistance, improper illumination, inefficient anesthesia, undue haste, dissection in the midst of blood, unnecessary trauma and above all, a deficient conception of the surgical importance of operations on the nose and throat, are contributing factors in what I have been attempting to describe. That the pendulum has begun to swing toward conservatism is evidenced by some recent admissions of the ill results of indiscriminate operating. It is unfortunate, though inevitable, that reports must appear of fatal hemorrhage,

lung disease, cervical adenitis, local infection, septicemia, impairment of the voice and subsequent quinsy and tonsillitis following tonsil removal; but I have reason to believe that few such complications would occur if the operator were fully capable in the dual role of physician and surgeon—certainly a patient would not be subject to tonsillitis or quinsy if the gland had been totally removed. Nevertheless, if the tonsillotome method were used as recklessly today as in the extirpation method, its record would undoubtedly show less to recommend it. Radical removal of a portion of the neck should be condemned rather than a radical removal of the tonsil. Neither should every tonsil be removed simply because it happens to exist.

Most patients are well satisfied with the conditions following the removal of tonsils and adenoids, because of the freedom from obstruction and recurrent infection; but could some know how much they are needlessly losing through impaired function of the velum and component structures, such surgery would be placed in the category of that demanding the most expert service.—*Jour. A. M. A.*

EIGHT YEARS OF CHLOROFORM ANESTHESIA IN NOSE AND THROAT SURGERY*

Dr. Charles Prevost Grayson, Philadelphia

When for a number of years one has obstinately defied the opinions and prejudices of his friends and colleagues about some unconventionality of surgical procedure, and when for this long time he has turned a deaf ear to thier warnings and their prophecies of ultimate disaster, the time finally arrives when he must either cry peccavi and renounce his hersey, or else claim that his persistency has been fully justified. Perhaps it might be considered somewhat premature for me to make this claim now with reference to my use of chloroform as an anesthetic, but even if I avoid this possible criticism

by postponing the claim for a few more years, it may not be too soon for me to offer you what I may at least venture to call a preliminary report of my experience with it. So generally and deeply rooted is the prejudice in this northeastern section of our country against the use of chloroform as a general anesthetic, that I could not fail to realize when I began to employ it for this purpose that I was exposing myself to the shafts of criticism and I have been perfectly conscious throughout these eight years that the occurrence of some otherwise unexplainable fatality would at once put chloroform and myself on the defensive and that, to slightly alter the words of Thomas Jefferson, I would be forced by a decent respect for the opinions of my fellows to declare the causes which had impelled me to dissolve the bonds which had hitherto connected me with ether. As a preface to this declaration, I wish to say that my use of chloroform has been largely limited to the briefer operations of nose and throat surgery. I mean by these the removal of adenoid growths and of the faucial tonsils, the straightening of septal deviations, certain of the sinus operations and several tracheotomies. In giving you the reasons for my abandonment of ether, I do not propose to try your patience by dwelling at length upon the relative merits and demerits of ether and chloroform as general anesthetics, for I think I may assume that if it were not for the immediate and remote dangers that have been attributed to it, chloroform would be regarded as an ideal anesthetic for such operations as I have mentioned. Its inoffensive odor, its freedom from irritating effect upon the air passages, the quickness not only of the narcosis that it produces, but of the patient's emergence from it, and finally the comparative, if not complete absence of the nausea, retching and vomiting that follow as a rule the administration of ether, all these features combine to make its appeal to both the surgeon and the patient a very powerful one.

Almost always, I think I may say, the entire upper air-tract of the patient who has a pathologic nose or throat is apt to

*Read at the meeting of the American Laryngological, Rhinological and Otological Society, May 1912.

be both hyperemic and hyper-sensitive, and, as a consequence of these clinical features, an anesthetic the vapor of which is irritating to the respiratory mucous membrane is objectionable. Such an anesthetic is ether, and although its disturbing effect may be partially over-come by preceding its administration with that of nitrous-oxide, yet this Tandem method of employing the two is apt to result in even an increase of the vascular engorgement which for several reasons is, to say the least, undesirable. Again, the post-anesthetic nausea and retching characteristic of ether narcosis certainly tend to promote and prolong a capillary hemorrhage that in their absence would usually quickly subside. It was for these reasons that I thought myself justified in disregarding for a time our local prejudice against chloroform and in satisfying myself as to whether or not it was well founded. The time has lengthened to eight years, the number of operations in which I have used it has reached and passed 3,800, and I have yet to experience my first regret for having ventured to tread, what many seem to consider, the crape-bordered pathway of chloroform. And to do full justice to chloroform I must acquaint you with several risks to which I have subjected both it and myself, in spite of the fact that they might perhaps have been avoided. In our private work we naturally have for varying periods of time, one or two thoroughly competent anesthetists whose skill and care reduce the element of danger to the minimum, but in a general hospital where the official anesthetic may be wanted in half dozen different operating rooms at the same moment, we are forced very often to depend upon the young interne who happens to be attached to our service at the time. I have done this, not occasionally, but habitually, and therefore in the course of these eight years my chloroform anesthetics have been conducted by a series of twenty-five or more inexperienced young men. In addition to this risk, I have assumed another—that of not withholding chloroform in a number of cases that presented cardiac valvular insufficiency. In such cases there is an increased

risk to be considered, it seemed to be entirely neutralized, or at least controlled, by a somewhat lighter anesthesia and a greater rapidity of operating. Finally, I have not limited the use of chloroform to children, but have employed it also in a considerable number of adults of both sexes.

I am quite aware that the mere statement that in all this time I have not met with a single accident, will not protect me from the criticism of those who have used and who know chloroform as well, or better than I do, and who have abandoned its use because of what have seemed to them good and sufficient reasons. Any opinion that is founded on the results of personal experience, has its scientific value, but the opinion of the criticism that is merely academic, that is based upon the study of statistics and current literature rather than upon a personal and practical investigation of the matter that it concerns, although this sort of opinion may possess some abstract interest, it is wholly lacking in concrete, clinical value. And, therefore, I am venturing to give you my opinion of chloroform because it has at least the one merit of coming straight from the operating room, and since I have frankly confided to you the several risks that I have taken, I think I may be permitted to tell you also the measures that I have taken to combat them. And these are connected with the patient, the anesthetic and the manner of its administration.

In the first place, the general condition of the patient, his aggregate vitality, has always been reckoned as closely as possible. Naturally there can be no arbitrary standard about a matter of this kind, but experience will usually enable one to make a sufficiently accurate estimate of the patient's physical strength to permit the making of a safe choice between two or more anesthetics. If, for instance, the patient shows in a marked degree what we ordinarily call "poor condition," if he is distinctly anemic or septic, or if he has been suffering from a long-continued, suppurative process such as would have rendered him a little more liable to what has been termed "delayed chloroform

poisoning," then ether was always chosen. These several conditions had to be pronounced, however, to make me guilty of this infidelity to chloroform.

It is almost as unfortunate as it is remarkable that an article like chloroform which, for purposes of anesthesia, is presumed to be always of the same standard of chemical purity and physiological energy should display the inequalities that it does when produced by the different makers. If we compare the results obtained from half a dozen different brands of chloroform, all the product of reputable manufacturing chemists, we find that they may differ quite noticeably in the amount required for anesthesia, the rapidity with which this effect is produced, its duration, the degree of irritation that they severally occasion, and their effect upon the circulation and respiration. It was because of this variation that after some months of comparative tests I finally selected one brand and have employed it exclusively since that time. And since it is extremely important that a freshly opened bottle be used for each private or for each series of dispensary patients, the convenience of having it marketed in one ounce containers is by no means an inconsiderable one. The rapidity with which chloroform deteriorates when once exposed to the air, is well known.

Finally, and probably most important, the method of administration claims attention. From the beginning I have used the "open method" and have carried it out with the Esmarch mask. Instead of stretching upon this, however, a single sheet of thick lint, as is advocated by several expert anesthetists, I have always employed ordinary surgical gauze and, according to the age, sex, and condition of the patient, I have used from four to six layers of this in the attempt to adapt to each case the proportionate admixture of air that he should have. Although a two percent. strength of chloroform vapor may answer very well as a general rule, yet I think that there are many cases in which we may either lessen or increase this strength with advantage. Of course, there can be no such thing as mathematical

accuracy in this matter when the open method of administration is practiced, but it becomes in time fairly easy to approximate it with sufficient closeness. I follow the advice of almost all the authorities in starting the anesthetic very slowly and in not quickening it until the patient's breathing has become of normal rhythm and depth. Even then I do not permit it to be crowded for any reason whatever. If vomiting should seem imminent, the skin becoming pale and moist, the breathing shallow, and the pulse scarcely perceptible, instead of pushing the chloroform as is the custom with ether in the presence of this threatened interruption, it is at once suspended and I wait either for the stomach to be emptied or for the retching to subside; and it is not until the color, respiration and pulse have regained their normal state that the anesthesia is resumed. The depth to which this is carried naturally varies according to the probable duration of the operation. It is always deep enough to preclude any possible shock and yet not so deep that it will be unnecessarily prolonged beyond the conclusion of the operation. In fact, I am apt to be more pleased than disturbed if the patient gives noisy evidence of returning consciousness before I have quite finished.

This suggests, in passing, another advantage that chloroform possesses over ether, namely, that if the etherized patient comes out sufficiently to interrupt the progress of the operation, several minutes may be needed to get him under again, whereas, with chloroform a half dozen inspirations of the vapor will usually be sufficient to enable one to continue.

And now, I have only to add a few details of a general nature. It is almost self-evident that terror on the part of the child or any great apprehension on that of the adult patient will delay narcosis and increase the quantity of chloroform necessary to produce it. Moreover, unless particular care is observed the screaming child with its exaggerated depth of inspiration is apt to carry a certain percentage of chloroform beyond the tidal into the residual air of the lungs, and unless the vapor is greatly attenuated by holding the

mask at a distance from the face, the possibility of sudden toxemia may be dangerously increased. You are, no doubt, familiar with Henderson's views concerning the condition to which he has given the name *acapnia*. If, as he contends, carbon dioxid is the sole stimulus to the respiratory center, then it is easily conceivable that the excessive pulmonary ventilation associated with the struggles of an alarmed child may so reduce the carbon dioxid content of the blood that the possibility of apnea may become a probability. It is for these reasons, much more practical, you will admit, than sentimental, that I never grudge the several minutes sometimes required to allay a child's fear and quiet its cries.

In this connection it is important also to remember that the superior laryngeal nerve is, if you will pardon my using so venerable a figure of speech, the watchdog of the lower air-tract, and that if this be subjected to such irritation as would proceed from too rich an anesthetic mixture, its powerful inhibitory action will be exerted not only upon the respiratory, but upon the cardiac centers as well. In explanation of my apparent rashness in using chloroform in cases of heart murmur due to valvular lesions, I need only state my belief that the valvular defect has very little contra-indicative significance if the myocardium itself is above pathologic reproach. If, however, there should be any evidence of degenerative change or lack of vigor on the part of that muscle, I hope you will need no assurance that I would not disregard the warning conveyed by these conditions.

Finally, to anticipate the question that I may be asked as to why I exposed my patients to the dangers associated with such a number of young and inexperienced anesthetists, I wish to say that I always make it clear to each new interne that it is I who assume the full responsibility of the chloroform anesthesia, and that therefore I do not expect his feelings to be wounded if I venture to utter an occasional suggestion or warning. At the beginning of his service with me each of them is shown exactly how I wish the an-

esthetic given, he is warned concerning every possible accident and is carefully instructed in the clinical signs that foretell the occurrence of each. And from then on the chloroform is not given solely by him or by me, but we give it together; it is an example of team-work, we both of us watch the patient's color and respiration, his finger is on the temporal and mine on the radial artery, and not only do our eyes watch the rhythm of breathing, but our ears listen to its smoothness and are intent upon catching any evidence of obstruction or irregularity. From time to time the pupil and other reflexes are tested, and until the last drop of chloroform has been given and the mask removed from the face, absolutely nothing is permitted to distract our attention from the patient's condition.

In conclusion, it must have become quite evident from all that I have said, that I think it much more prudent and infinitely easier to prevent accidents than to cope with them successfully should they occur. I do not believe that the cardiac failure and other more or less serious mishaps of chloroform anesthesia, however sudden they may seem, ever occur without both warning and provocation. In other words, I do not believe that there is anything treacherous in the toxic action of this anesthetic; but, if any man because of a few score or even a few hundred successful administrations of it is going to be lulled into a state of over-confidence and beguiled into carelessness that is commonly begotten of it, then it is he rather than chloroform that is to be held accountable for any unfortunate consequence. And I am perfectly willing that you should draw from this the very obvious inference that in my opinion many of the fatalities that have occurred under chloroform anesthesia have been attributable no more to the chloroform itself than to the carelessness or ignorance of those who have given it on those occasions.

In this connection and as a distinctly parallel case, I need scarcely recall to you the disfavor, the disrepute with which cocaine was threatened during the first year or two following its introduction,

Death after death, we shrink from any calculation of the actual number, was laid at the door of this immensely useful but very much abused drug. Idiosyncrasy, that favorite refuge of incompetency and recklessness, was dragged forward again and again, to explain, or rather, to excuse these often inexorable fatalities. Just as for many years past the status lymphaticus has been made to serve as the scape-goat for numbers of deaths that have been really due to the incautious handling of chloroform and other anesthetics.

Unhappily, the therapeutic efficiency of many of our most useful drugs is very closely associated with, if not dependent upon their power as poisons, and it has often seemed rather singular to me that instead of being content with the safety that is afforded by an apportionate measure of caution in their administration, we are so apt to turn to synthetic chemistry in the search of a substitute that will have all of the virtues and none of the dangers of the original drug. However successful chemistry may have been in providing us with such make-shifts, for they are seldom more than that, I scarcely anticipate contradiction when I say that nothing can ever completely substitute care and common sense. Emphasizing, therefore, the essentiality of these and all that they imply, and insisting upon the freshness and purity of the drug, I say in closing that my experience with chloroform up to this time leads me to ask for no pleasanter, safer nor more wholly satisfactory an anesthetic. —The Laryngoscope.

1435 Spruce Street.

EYE-STRAIN CAUSED BY "MOVIES"

Constant attendance at moving-picture shows may cause eye troubles similar to those of eye-strain. This statement is made by Dr. George M. Gould in a recent issue of the Journal of the American Medical Association. Dr. Gould says that he has recently made a practice of asking his patients, "What were you doing the evening or afternoon previous to your headache or giddiness or upset stomach?"

"Nothing at all," is the usual reply, "that is, nothing out of the ordinary. I was at the 'movies' for a couple of hours and went to bed as soon as I got home, as I was feeling badly." Dr. Gould warns physicians, oculists and nerve specialists to be on the watchout for such symptoms, and when found that attendance at moving-picture shows be considered as a cause. The symptoms, he says, do not differ greatly from those caused by strain or abuse of the eyes of any kind. The most common are those of sick headache, such as intense weariness of the eyes and brain, a dazed, "good for nothing" feeling, lack of energy and appetite, "upset stomach," vomiting, sleepiness and other effects. If the patient is wearing glasses, he may think "my glasses need changing." But on consultation with his oculist it may be found that the glasses are all right, and that the cinematograph is to blame. But if the "movies" are not to blame, probably fitted glasses will enable the patient to attend moving-picture shows without discomfort. Without proper glasses, however, the cinematograph will more certainly cause nervous symptoms in the patient than when good glasses are worn, as there is no doubt that moving-picture shows put a terrific strain on even the least defective eyes, while the strain is increased by poor glasses or lack of glasses when they are needed. Dr. Gould says that the principal faults of moving-picture shows is that the "fixation point," chosen by the eye (that is the point on which the eye rests) is unstable and jerky and the eye is tired and strained in following this point. The swiftly passing series of pictures tires the eye and the brain, and the illumination is generally poor. To correct these faults he suggests that the time of exposure of each image be shortened and that better illumination be required. The enormous growth of moving-picture shows in the last ten years and the adoption of the cinematograph for teaching and for various commercial uses, as well as its probable growth in the future, makes it important that the effect of moving pictures on the eyes should be carefully observed.

THE JOURNAL OF THE MEDICAL ASSOCIATION OF GEORGIA.

300-302-304 Harrison Bldg.

SUBSCRIPTION

PRICE.....ONE DOLLAR PER YEAR

SINGLE COPIES of this calendar year, 15 cents; of the previous calendar year, also 15 cents; two years old, 20 cents; three years old, 25 cents; in other words, 5 cents additional is charged for each year preceding the last calendar year.

REMITTANCES should be made by check, draft, registered letter, money or express order. **Currency should not be sent unless the letter is registered.** Stamps in amounts under one dollar are acceptable.

CHANGE OF ADDRESS notice should give both the old and the new address, and state whether the change is **permanent** or **temporary**. The change notice must reach us **ten days** in advance of the date of the issue which is to be forwarded to the new address.

WARNING: Pay no money to an agent unless he presents a letter showing authority for making collection.

ADVERTISEMENTS

Advertising forms go to press eight days in advance of the date of issue. In sending in copy time must be allowed for setting up advertisements and for sending proofs. No proprietary medicines can be advertised until approved by the Council. Advertising rates will be sent on request.

CONTRIBUTIONS

EXCLUSIVE PUBLICATION: Articles are accepted for publication on condition that they are contributed solely to this journal.

CONTRIBUTIONS TYPEWRITTEN. Authors should have their contributions typewritten—**double-space and with ample margin**—before submitting them. The expense is small to the author—the satisfaction is great to the editor and printer. We cannot promise to return unused manuscript, but try to do so in every instance. Manuscript should not be rolled or folded.

ILLUSTRATIONS: Half-tones and zinc etchings will be furnished by THE JOURNAL when satisfactory photographs or drawings are supplied by the author. Each illustration, table, etc., should bear the author's name on the back. Photographs should be clear and distinct; drawings should be made in black ink on white paper. While we cannot guarantee to return used photographs and drawings, we use our best endeavors to do so after the article is published, if the word "return" is written on the back of each.

ANONYMOUS CONTRIBUTIONS, whether for publication, for information, or in the way of criticism are consigned to the wastebasket unread.

NEWS: Our readers are requested to send us items of news of a medical nature, also **marked** copies of local newspapers containing matters of interest to physicians. We shall be glad to know the name of the sender in every instance.

DUES

The State Secretary would call the attention of members to the fact that practically no dues for this year have been collected to date. He would likewise urge that all members pay their dues as promptly as possible in order that proper credit may be given before the Annual Meeting. The work of the secretary's office is always unusually heavy in arranging other matters, for some months before each annual meeting, and a prompt payment of dues at this time will enable him to attend to the other business of the Association with much more dispatch.

The attention of all members of County Societies is again called to the fact that on one may join a county society unless he joins the State Association. He must pay his State dues when he makes application for membership in his county society. The secretary notes with surprise that some of the officers of District societies are eligible only when they belong to County societies, and yet their names do not appear on the State roster. County secretaries are requested to bear this in mind and not retain as members those who have not paid their dues to both County and State.

SEND IN TITLES

Members desiring to read papers at the next meeting of the Association are requested to send titles of same to the secretary at once so that the program committee may ascertain whether or not it will be necessary to divide the body into sections. As is well known, a number of papers have not been reached at each meeting for a number of years, and the work of the scientific body has been so rushed as to make it very unsatisfactory for everybody. If the number of papers is sufficient the program committee contemplate an arrangement whereby more time may be given to the discussion of interesting papers, and also the inviting of one or more distinguished guests to address the meeting.

A number of titles have already been sent in, and it will be of great assistance to the committee if all others be forwarded as early as possible.

COMMITTEE ON ENTERTAINMENT

The Committee on Entertainment appointed by the (Chatham) Georgia Medical Society to arrange for the meeting of the State Association at Savannah in April, is as follows:

Dr. Ralston Lattimore, Chairman; Dr. T. J. Charlton, Dr. H. H. Martin, Dr. T. P. Waring, Dr. J. Lawton Hiers, Dr. J. A. Crowther, Dr. J. L. Jackson, Dr. W. A. Norton, Dr. J. R. deCaradeuc.

DEATH OF DR. T. J. CARSWELL

Dr. T. J. Carswell of Waycross, a member of the Medical Association of Georgia, and Secretary of the Eleventh District Medical Society, died February 11th, as a result of injuries received in an automobile accident.

At a meeting of the Alumni Society of the University of Georgia Medical College held January 29th, the following officers were elected for the ensuing year:

President, Dr. L. G. Hardman, Commerce, Ga.; 1st Vice President, Dr. LeGrand Guerrey, Columbia, S. C.; 2d Vice President, Dr. E. W. Warren, Palatka, Fla.; Secretary, Dr. Chas. W. Crane, Augusta, Georgia.

NEW MEDICAL BUILDING DEDICATED

The Medical Department of the University of Georgia, located at Augusta, dedicated its new medical building January 29. Special exercises were held during which the LL.D. degree was conferred on Dr. William M. Polk, dean of Cornell University Medical College, and Dr. J. A. Wither- spoon, president-elect of the American Medical Association. Governor Joseph M. Brown, Mayor L. C. Hayne of Augusta, and a large number of other distinguished guests were present.—*Jour. A. M. A.*

THE SPECIALIST

The hurriedly made specialist in medicine—"the egregious expert"—to modify slightly a familiar and at present popular proverb, believes and acts on the principle that nothing succeeds like excess—excess of refinement in specialism. The narrow specialist, exotically grown and narrowly confined, cannot last and even now is on the wane. Feeling that he is marching in the footsteps of natural advance when he decides to become a specialist, he believes that, like the cell, the more highly specialized the more advanced the organism. As he proceeds in experience his views become more and more narrow. He forgets

that no group of cells acts independently. "The man who lives and moves and has his being only among experts of his own type is merely an example of frenzied isolation." The man who goes abroad for three months and thenceforth sets himself up in the temples of the experts is said to be "largely a bearer of other men's responsibility—or a scapegoat." But he is unnecessary. While it is true that "no man can study medicine in its entirety," and "surgeons, physicians, eye-men, gynecologists, and so forth, we must have," each is a part of a whole, says The Journal of the American Medical Association, and no one should attempt to dominate the whole. The refinement of specialism leads to narrowed efficiency and thence to the vanishing-point of practical effectiveness. Too close concentration will lead to elimination. Let the narrow specialist know his limitations and keep to his place. His opinions should be treated gravely as such and not as absolute, proved facts. He makes an excellent servant but a bad master.

SENATE DECLINES TO CONSIDER OWEN BILL

The United States Senate recently, by a tie vote, refused to take up the consideration of the Owen Bill. This does not finally dispose of the bill as it still retains its place on the Senate calendar and can be called up at any time and considered by a majority vote of those Senators present. As it is realized by those friendly to public health legislation that there is little chance of the bill passing the House at the present session, the tie vote on the question of its consideration can justly be regarded with satisfaction by the friends of a broader national health organization. It is generally understood that Senator Owen will introduce a bill at the next session of Congress, if the present bill does not pass, but it is highly probable that such a bill will be redrafted and considerably modified. If this is the case, says the Journal of the American Medical Association, it is to be hoped that Senator Owen will go back to the original plan and draft a bill calling

for a Department of Health, with a secretary in the cabinet. The growing realization of the importance of this subject and the increasing support for it show the educational value of the agitation which has extended over the last three years. The opposition has reached its high-water mark, and the false statements which were so widely circulated regarding the object of the measure and the purpose of its advocates have reacted. The Owen bills have made people think. If they will only think hard enough and long enough to realize the great importance of health conservation, the eventual, inevitable result will be the establishment of a national Department of Health. Nothing short of this should be the aim of those who appreciate the present public health conditions and the needs of the future.

ALLEGED DISCOVERY OF A "CANCER GERM"

Our readers may remember the sensational matter which recently appeared regarding Dr. Friedmann's tuberculosis "cure" in the form of a syndicate letter by a newspaper correspondent. The preceding week the newspapers had a similar sensational letter by the same writer concerning an alleged discovery of the cancer germ by a Dr. Odin of Paris. On account of this publicity, The Journal of the American Medical Association publishes this week an extract from a letter from Dr. Edwin Walker of Evansville, Ind. Dr. Walker writes:

" . . . One of my chief reasons for stopping in Paris was to investigate the alleged 'cancer cure' of Dr. Gaston Odin, a report of which was published in newspapers throughout the United States.

"With a very intelligent interpreter, I went to his address, as given by the directory, 63 Rue Vaman. This is in a cheap quarter and the place proved to be a very modest apartment house. The janitor informed us that our doctor had just removed to Boulevard des Invalides, and there we found him in elegant apartments, newly furnished in the most expensive manner. The neighborhood was one of

the best. Evidently prosperity was coming from some source.

"Presently he entered, smoking a cigaret. He was small, about 5 feet 5 inches, weighing about 120 pounds, and was a typical Frenchman, about 45 years old, I should think. He looked well fed and well wined. He was very pleasant and talkative. His story was about as follows:

"He had been working alone on the cancer problem for fifteen years and had exhausted all his means. He was connected with no hospital and had no aid from any one. He had discovered the germ of cancer in the blood and had also found a remedy in a serum which would absolutely cure all cases.

"I asked him his methods of finding the germ, but he said he was not prepared to demonstrate it to me as his laboratory was in disorder.

"I asked him if he had published anything, and he gave me a short article, merely stating that he had found these germs, but giving nothing of his methods, nor any proof, experimental or otherwise, that the 'germs' were really those of cancer.

"I then asked him about his serum. This was prepared by a process which he kept secret; he injected it under the skin not at the site of the cancer.

"I asked him then if he was prepared to sell the serum to others. To this he answered that the French government would not allow him to sell a serum unless experts would pass on its value as well as its harmlessness. With this he broke out into a denunciation of governments in general and the medical profession in particular, because they interfered with his freedom in the matter. He was very anxious to know if he could do better in America. He was very willing to consider a proposition to buy the right to use his remedy elsewhere. . . .

"I later inquired about Dr. Odin's professional standing and found that he was connected with no hospital, so far as I could learn; that he had published nothing and made no demonstration of his discovery. He has never done any work on lines of research or investigation that any

one knows. In short, he claims to have made the greatest discovery of the age, but nothing in his previous work or present evidence supports that claim.

"He did not appear to be overjoyed that he had found the greatest boon to the human race, but he seemed very anxious to make money. . . ."

"To me there was a very sad side to this interview. He took me into his private office and showed me a large number of letters, most of them from America. These were from unfortunate sufferers from the worst of all diseases, who, in desperation, are appealing to this miserable little charlatan for relief; and this has been brought about by the reports published in newspapers. . . ."

SOCIETY NOTES

FIRST DISTRICT MEDICAL SOCIETY

The mid-winter meeting of the First District Medical Society of Georgia was held at Statesboro, Ga., Wednesday, Feb. 12. The program was most interesting and instructive, and was as follows:

Invocation—Rev. L. A. McLaurin, of Statesboro.

Address of Welcome on behalf of the City of Statesboro—Mayor S. J. Crouch.

Address of Welcome on behalf of the Bulloch County Medical Society—Dr. A. J. Mooney, of Statesboro.

Response—Dr. J. L. Jackson of Savannah.

Paper—The Classification and Pathology of the Cirrhoses of the Liver, with case report—Dr. V. H. Bassett of Savannah.

Paper—Arteriosclerosis—Dr. D. B. Edwards of Savannah.

Paper—Malaria and its Treatment—Dr. Henry A. Jones of Millen.

Paper—Treatment of Fractures—Dr. Geo. R. White of Savannah.

Paper—The Financial Condition of the Doctor and the Cause—Dr. D. L. Deal of Silston.

Paper—Why the Doctor is Poor—Dr. A. L. R. Avant of Savannah.

Paper—Bismuth Paste Treatment of Tu-

bercular Sinuses—Dr. D. W. Kennedy of Metter.

Paper—Vaccine Therapy—Dr. A. B. Cleborne of Savannah.

Paper—Headache, its Cause and Treatment—Dr. B. B. Jones of Metter.

Paper—Large Specific Condylomata—Dr. Walter Norton of Savannah.

Paper—Neglect of Duty in Obstetrics—Dr. Walter S. Wilson of Savannah.

Paper—The Surgery of the Colon—Dr. T. P. Warring of Savannah.

Paper—Report of Clinical Cases—Dr. Kilpatrick Cross of Statesboro.

Paper—Traumatic Surgery of the Kidney—Dr. A. J. Waring of Savannah.

Paper—Some Dependable Drugs in Medicine—Dr. H. W. Doster of Rocky Ford.

Paper—Infant Stools—Dr. H. W. Hesse of Savannah.

Paper—New Operation for Prolapsus and Retroversion Uteri—Dr. C. M. Rakestraw of Savannah.

Paper—The Treatment of Typhoid Fever—Dr. John W. Daniel of Savannah.

Paper—Melena Neanatorum—Dr. L. Lee of Savannah.

Paper—The Use of the Exploratory Needle in Diagnosis and the Dangers Thereof—Dr. W. B. Crawford of Savannah.

Paper—Meningitis—Dr. Chas. Usher of Savannah.

THE LIBRARY OF THE GEORGIA MEDICAL SOCIETY, SAVANNAH

It is desired to secure the following:

Transactions of the Medical Association of Georgia for the sessions of 1849-1850-1851-1852; 1855 to 1867 inclusive; 1873-1875-1876 and 1877.

Copies of the Georgia Practitioner, especially Vol. I, No. 4, and Vol. II, No. 2.

Copies of the Savannah Medical Journal.

Copies of the Oglethorpe Medical Journal.

Copies of the Georgia Journal of Medicine and Surgery.

American Journal of Obstetrics, Vol. 7, 1874.

Public Health; reports and papers of

the American Public Health Association, Vol. V.

Any books, pamphlets, manuscripts, etc., bearing upon the history of medicine in Georgia will be received and preserved for reference.

Address: V. H. Bassett, M.D., Secretary and Librarian; Geo. R. White, M.D., Chairman.

ELEVENTH DISTRICT MEDICAL SOCIETY

The following officers were elected for the ensuing year:

President, Dr. Dallas Williams, Folkston; Vice President, Dr. C. W. Roberts, Douglas; Secretary-Treasurer, Dr. T. J. Carswell, Waycross; Censors, Dr. M. M. Johnson, Waycross, three years; Dr. J. G. Tuten, Jesup, two years; Dr. J. W. Simmons, Brunswick, one year. The secretary and president are censors ex-officio.

Dr. J. E. Knight, died November 18, 1912. The following tribute was read before the 11th District Medical Society on November 19th, and adopted by that body, a copy ordered spread on the minutes and a copy be sent to the State Journal.

As we come together this morning to pay this tribute to our departed fellow physician, Dr. J. E. Knight, our hearts are all bleeding and our souls are harrowed with grief. His death has caused us the deepest and most heartfelt sorrow that has befallen us during the history of this society.

Both the old and the young physicians admired the manliness and sincerity of Dr. Knight, and his taking away saddens our hearts with a peculiar grief. This society was the pride of his life, the thing around which the tenderest tendrils of his heart entwined—and here we knew and loved him as a brother. We mourn not only for the loss to ourselves, but the great loss to the state; for had his life been spared he would have been a great blessing to the mass of suffering humanity.

Although modest and retiring as a woman, yet he was fearless and independent;

he depended on himself, thought for himself and often wrestled with doubts in search for the truth. He always had an opinion of his own and ever acted from a standpoint of duty. He could not be influenced by the petty politicians, and he could not be swayed by public opinion, but with him the sublimest words were always "duty" and "right." In this hour of sadness our sincere sympathy goes out to the grief stricken hearts that were bound to him by ties of blood. We feel for them in their sore affliction and pray that our Heavenly Father will bind up their broken hearts. Yet we mourn not as those who have no hope; for we believe our departed brother has pillowed his head upon the bosom of Christ. Little did we think his speech in June was his last farewell. But a few short days ago he was with us; and now—"The strife is o'er, the battle done; and death is past, the victory won." With the dying year he bade the earth good-bye, and with the new year he enters the new life. Already he has entered the Pearly Gates and is now waiting to welcome us **Home**.

The following officers were elected at the Annual Meeting of the (Chatham) Georgia Medical Society, Tuesday, Jan. 14, 1913:

President, Dr. V. H. Bassett; Vice President, Dr. J. L. Jackson; Secretary-Treasurer, Dr. A. J. Waring; Board of Censors, Dr. Jabez Jones, Dr. Geo. R. White, Dr. J. O. Baker; Library Committee, Dr. Geo. R. White, Dr. J. L. Jackson, Dr. V. H. Bassett; Delegates to the Medical Association of Georgia, Dr. T. J. Charlton, Dr. Jabez Jones.

The more money The Journal of the Medical Association of Georgia makes out of its advertisements the less it costs the State Association to run the paper. This means that every member of the State Association has an interest in the advertising columns. If one business firm advertises and another does not, patronize the one that does. It is money in your pocket.

BOOK REVIEWS

PSYCHANALYSIS: ITS THEORIES AND PRACTICAL APPLICATION

By A. A. Brill, Ph. B., M.D., chief of the Neurological Department of the Bronx Hospital and Dispensary; Clinical Assistant in Psychiatry and Neurology at Columbia University Medical School. Octavo of 337 pages. Philadelphia and London: W. B. Saunders Co., 1912. Cloth, \$3.00 net.

Books of this character must necessarily have a limited list of readers. Most physicians are not proficient metaphysicians and do not crave the treatment of "border-line" cases—the neuroses and mild psychoses. The writer plainly states that, "One cannot expect to become proficient in psychanalysis unless he has mastered at least Freud's theories of the neurosis, the interpretation of dreams, the sexual theories, the psychopathology of every day life, and his book on wit, and last but not least, has not had a training in nervous and mental work." To those interested in psychological imaginings this book will afford much pleasure in its chapters on The Psychoneuroses, Dreams, The Actual and Compulsion Neuroses, Obsessions, Psychological Mechanisms of Paranoia, Psychopathology of Every Day Life, Hysterical Fancies and Dreamy States, etc.

A TREATISE ON DISEASES OF THE EYE

By John Elmer Weeks, M.D., Professor of Ophthalmology in the University and Bellevue Hospital Medical College (Medical Department of New York University); Surgeon to the New York Eye and Ear Infirmary; Member of the American Ophthalmological Society; Honorary Member of the Royal Hungarian Medical Society of Budapest, etc. Octavo of 944 pages with 528 engravings and 25 full page plates in colors. New York and Philadelphia: Lea & Febiger.

This is one of the best books on the subject that the Journal has had the pleasure of reviewing. It is not only of the great-

est possible interest to the physician specializing in diseases of the eye, but to the general practitioner and the student as well. The chapters devoted to the anatomy and embryology of the eye are much more complete than is usually found in works of this character.

The general principles of Optics are elucidated in a simple manner, and one much more easily comprehended by the student than is usually the case in books of this character.

The chapter on the relations of diseases of the Eye to general conditions is of such a nature as to prove of great interest to the general practitioner, while the final chapter on the preparation of specimens, will cause profound rejoicing in the laboratories. The plates and cuts are numerous and well executed. W. C. L.

SAFEGUARDING THE SPECIAL SENSES

General advice regarding the use and preservation of the Eyes, Ears, Nose and Throat.

By Henry O. Reik, M. D., formerly associate in Ophthalmology and Otology in the Johns Hopkins University and surgeon in the Baltimore Eye, Ear and Throat Hospital. 125 pages, illustrated. Philadelphia: F. A. Davis Co.; 1912. Cloth 75c net.

This little volume is of interest to the laity as well as to the physician. It should be in the hands of every one who teaches either children or adults, in any capacity. The author in a simple way goes into the details of the structure and physiology of the organs of the special senses, and details the methods of caring for same.

The volume should be in every school library, and should be consulted by school physicians and others who may have occasion to instruct the public concerning health or hygienic matters.

A peritonsillar abscess can be opened almost painlessly if the line of incision in the mucous membrane, and the tissue beneath, are infiltrated with an anesthetic solution injected with a syringe just as one anesthetizes the skin.

**RESUME OF EXAMINATIONS HELD
BY THE BOARD OF MEDICAL
EXAMINERS IN ATLANTA,
OCTOBER, 1912**

Passed

Atlanta School of Medicine	2
Birmingham Medical College	3
Chattanooga Medical College	1
Howard Med. Col., Washington D. C.....	1
Leonard Med. College, N. C.....	1
Maryland Med. College, Baltimore.....	2
Medical College of S. C.....	2
N. C. Medical College	1
Philadelphia Med. Sur. College.....	1
College of Physicians & Surg., Boston..	1
Tulane University	1
University of St. Louis	1
University of Maryland	1
University of Louisville	1
Westminister Hos., London, England....	1

20

Failed

University of Tennessee	1
University of Louisville	1
Maryland Medical College	1
Meharry Medical College	7

10

MEDICAL COLLEGE DID NOT APPEAR

The mandamus case brought by the Southern College of Medicine and Surgery against the Board of Medical Examiners of the State was called for trial in the Superior Court here last week, but there being nobody present for the College except the local attorneys, and they refusing to try the case, it was dismissed by the Court. It will be recalled that this case was brought several months ago to compel the Board of Medical Examiners to examine the graduates of this College. The case was first heard by Judge Morris, was then taken to the Supreme Court by the College, and later came back here for trial before a jury, but, as stated above, the College failed to show up and the case was dismissed. The Board refused to examine the graduates of the College because, as the Board claimed, the College

was not equipped properly, and was graduating its students before they had completed the course required by law. It is supposed that the dismissal of the case will end the litigation over the matter.

SAVANNAH PHYSICIANS ENTERTAIN DR. J. EWING MEARS

He has Made Gift to the Medical Society Library

Dr. J. Ewing Mears of Philadelphia, was the guest of honor last night at an informal meeting of the Library Committee Book and Journal Club of the Georgia Medical Society, held at the B. P. and T. Club. It was an enjoyable affair. Most of the members of the club were present to meet Dr. Mears, who is an honorary member of the society.

Several timely scientific subjects were discussed. The papers were read by Dr. C. H. Lavender, Dr. Lawrence Lee and Dr. George R. White. In an informal manner the members joined in a general discussion of the themes. President V. H. Bassett presided.

Nearly every physician present was acquainted with Dr. Mears. He has been visiting Savannah for many years. He has taken a great deal of interest in the Medical Society and is proud of the progress the organization has made. In a reminiscent talk he said so, and urged the Savannah physicians to push forward with their plans for a society building. Dr. Mears has given a great deal of stimulating help to the society.

His chief interest now seems to be in the library. It became known yesterday that he had made another donation to the library fund. The check was sent to President Bassett with a letter which will be read at the meeting of the society next Tuesday evening. Dr. Mears was interested in the founding of the library and has from time to time given substantial assistance to those who have built it up.

It was a great pleasure of the doctors to have an opportunity of entertaining Dr. Mears in this way. He is highly esteemed by the members of the profession here and

elsewhere. His scientific works are widely read and studied; hence the opportunity of coming into intimate contact with him was appreciated by the Savannah physicians.

After the discussion a buffet lunch was served by the club management. This was an enjoyable part of the evening.

NEPHRITIS FOLLOWING TONSILLITIS

Idiopathic nephritis, whether acute or chronic, has always presented an added element of mystery when contrasted with idiopathic inflammation of certain other organs. Young subjects in the apparent prime of vigor and in the absence of any causal nexus, such as is usually necessary for the development of affections of this kind, are stricken down and either perish in a short time or become hopeless invalids. The questions most frequently asked under the circumstances have reference to the impossibility of foreseeing and preventing the lesions. Certain remote factors are grasped at which are, perhaps, not at all concerned in the etiology. We must assume that the organs presented a weak point in the economy and perhaps had been damaged by scarlatina in early childhood. Or investigation may show a familial tendency to nephritis. For corresponding exciting factors we have recourse to hypothetical toxins, exogenous or endogenous, such as are abundantly evident in secondary nephritis.

It is plain that any positive association of an idiopathic nephritis with any causal factor whatever, however slight this may be, may be made to throw reflected light on the entire question of etiology. At a medical meeting during the present year (Munchener medizinische Wochenschrift, No. 50, p. 2764) Geiger reports a series of cases in young subjects, from 12 to 25 years of age, who with year-long tendency to ordinary lacunar tonsillitis finally developed attacks of acute nephritis in immediate sequence to acute anginas. One patient was dead of uremia at the end of three weeks, while the others came off easily. Such cases are by no means rare.

In the absence of elaborate studies we do not know how the kidney lesions originate, but the supposition of a so-called septic rheumatoid infection is not unwarranted. Much of the nephritis in scarlatina doubtless originates in a similar fashion.

The lesson to be derived from such cases, if any is needed, is the necessity of extirpating chronically infected tonsils. From analogy we might expect that other cases may occasionally arise from intranasal and sinus disease.

PHYSICAL STRENGTH

There is no known drug that will add in the slightest degree to the strength or vigor of the human body, and no "tissue-builder" on earth except food. The only universally reliable "bracer" is exercise in the open air and sleeping with your windows open, and the only permanent tonics to the body are fresh fruit, red meat and green vegetables. A dollar's worth of cream contains ten times the "strength" of any dollar bottle of tonic ever invented. Eat plenty of real foods, the best you can raise or buy, and you'll have little need of either patent foods or patent medicines. Any remedy which universally, or even in the majority of cases, produces a sense of exhilaration and improvement is perfectly safe to contain a "cheater" of some sort, usually either alcohol or opium.—Woods Hutchinson, M. D., in the Delineator.

Soreness in the throat is a common complaint of nervous people. Close inspection will often show numerous fine white spots with red areolae.—herpes.

The more money The Journal of the Medical Association of Georgia makes out of its advertisements the less it costs the State Association to run the paper. This means that every member of the State Association has an interest in the advertising columns. If one business firm advertises and another does not, patronize the one that does. It is money in your pocket.

RATES FOR REPRINTS

100.....	\$1.00 per page
200.....	1.25 per page
500.....	1.50 per page
1000.....	2.00 per page

Covers to count as four pages when ordered

The Journal is owned and published by the Association, and all profit goes to make it better. Each member of the Association is financially interested in the Journal to the same extent as every other member, and each member is rightfully anxious for the financial success of the publication.

The greater this financial success, the greater the practical value can be made to the individual member, and hence the greater the value as an advertising medium.

Our advertisers, by their patronage, help to support the Journal, and make its successful publication possible. In return they expect, and rightfully, a fair return for their money. Every dollar spent by a member of the Medical Association of Georgia with advertisers in our Journal, in preference to non-advertisers, is a dollar spent in advancing his own personal advantage, for he has contributed something indirectly to the betterment of his own property.

The Journal cannot exist without the advertisers and their good will.

The advertisers cannot continue in business without the patronage of the medical profession.

The medical man cannot continue in business without the supplies for sale by the advertisers.

The interests of all are identical—the profession must depend upon the manufacturers, etc. The manufacturers, drug houses, etc., must depend upon the more progressive and more successful physicians. The interests of both are best served through the official Medical Journal—the Journal published by the profession in its own best interests, scientifically and ethically.

ADVERTISING RATES

1	Page 1 year.....	\$150.00
$\frac{1}{2}$	" 1 "	87.50
$\frac{1}{4}$	" 1 "	50.00
$\frac{1}{8}$	" 1 "	33.00
$\frac{1}{16}$	" 1 "	25.00
1	" 6 months.....	87.50
$\frac{1}{2}$	" 6 "	50.00
$\frac{1}{4}$	" 6 "	33.00
$\frac{1}{8}$	" 6 "	25.00
$\frac{1}{16}$	" 6 "	20.00
1	" 3 "	50.00
$\frac{1}{2}$	" 3 "	33.00
$\frac{1}{4}$	" 3 "	15.00
$\frac{1}{8}$	" 3 "	10.00
1	" 1 month.....	25.00
$\frac{1}{2}$	" 1 "	15.00
$\frac{1}{4}$	" 1 "	10.00
$\frac{1}{8}$	" 1 "	7.50

These rates do not apply to cover pages, space next to reading matter, or matter requiring to be reset.

OVER
4000 CASES
OF INFECTION

HAVE BEEN
TREATED WITH

PHYLACOGENS.

RESULTS:

90% OF
RECOVERIES.

RHEUMATISM PHYLACOGEN.
GONORRHEA PHYLACOGEN.
ERYSIPELAS PHYLACOGEN.
PNEUMONIA PHYLACOGEN.
MIXED INFECTION PHYLACOGEN.

Let us send you complete literature.

PARKE, DAVIS & CO.

DETROIT, MICH.

64th Annual Meeting, Savannah, April 16-18, 1913.

The Journal of the Medical Association of Georgia



PUBLISHED MONTHLY UNDER DIRECTION OF THE COUNCIL

Editorial and Business Office—300, 302 and 304 Harison Building.

Subscription Price, \$1.00

Entered as second-class matter, August 4, 1911, at the Post Office at Augusta, Ga., under the Act of March 3, 1879.

Vol. II

AUGUSTA, GA., MARCH, 1913

No. 11

A BOOK OF THE UTMOST VALUE TO THE PRACTITIONER

THE DISEASES OF THE STOMACH

WITH SPECIAL REFERENCE TO TREATMENT

By CHARLES D. AARON, M.D.

Professor of Gastro-Enterology and Adjunct Professor of Dietetics in the Detroit College of Medicine, Detroit, Mich.

Octavo, 555 pages, 42 engravings and 21 plates. Cloth, \$4.75 net.

Disorders of the stomach are among the most common and distressing of human afflictions, and yet this organ, owing to its accessibility and the control that can be exercised over its misuse, readily responds to modern scientific treatment. The literature of the stomach is vast, but it is possible to condense the practical features into a single volume, and this Dr. Aaron has successfully accomplished. He has covered the medical aspect of gastric disorders in such manner as to answer the actual needs of the physician, aiming always to afford practical knowledge and presenting the methods of treatment in full detail. The chapter on Examination of Stomach Contents includes those tests which will best assist in diagnosis and treatment. In addition to the chapter on Medication, due attention has been given to the use of antilytic serum and bacterial vaccines, an evidence that this work reflects the latest knowledge in its rapidly advancing department.

PHILADELPHIA
706-8-10 Sansom Street

LEA & FEIBGER

NEW YORK
2 West Forty-Fifth St.

CONTENTS AND DIGEST

ORIGINAL ARTICLES

Sanitation of Schools. By T. A. Mann, Health Officer, Brunswick.....	345
The Prevention of Pellagra. By Dr. H. F. Harris, Atlanta	348
Sanitation in the Home. By J. R. McMichael, M.D., Quitman.....	355
History of Obstetric Forceps. By A. J. Kilpatrick, M.D., Augusta.....	357
Treatment of Typhoid Fever. By S. T. Revell, M.D., Louisville.....	361
The Cotton Mill and Tuberculosis. By J. H. Hammond, M.D., LaFayette.....	365

EDITORIALS

A Word to the County Secretaries.....	371
Send in Titles.....	371
Plan of Organization.....	371
Titles of Papers, Savannah Meeting.....	371
New Members.....	372

SELECTED ARTICLES

Membership in the American Medical Association. By George H. Simmons, M.D., L.L.D., Chicago....	367
A Traveling Hospital for Rural Needs	370
Educational Bulletins of State Boards of Health.....	373
Agriculture and Public Health.....	374
A Reward for Colonel Gorgas.....	374
Delinquents.....	375

PANOPEPTON

Affords the nutrition to be derived from the entire soluble substance of prime lean beef and the entire soluble substance of whole wheat presented in a highly diffusible form in a sterile agreeable solution.

PANOPEPTON

Makes no demand upon the energy of the patient; on the contrary, is instantly available in conserving and reinforcing energy.

Literature giving full information about Panopepton, and analysis has always been freely submitted to the physician; will be sent upon request.

FAIRCHILD BROS. & FOSTER

NEW YORK

Journal of the Medical Association of Georgia

W. C. LYLE, M.D., Editor - Augusta, Georgia

OFFICERS

President.....W. W. PILCHER, M.D., Warrenton
First Vice-Pres.....J. W. PALMER, M.D., Ailey
Second Vice-Pres.....T. H. HALL, M.D., Macon
Sec.-Treas.....W. C. LYLE, M.D., Augusta

COUNCILORS

First Dist.—J. Lawton Hiers, M.D.....Savannah
Second Dist.—Gordon Chason, M.D.....Bainbridge
Third Dist.—V. O. Harvard, M.D.....Arabi
Fourth Dist.—C. L. Williams, M.D.....Columbus
Fifth Dist.—J. N. Ellis, M.D.....Atlanta
Sixth Dist.—R. H. Stovall M.D.....Macon
Seventh Dist.—W. P. Harbin, M.D.....Rome
Eighth Dist.—I. H. Goss, M.D.....Athens
Ninth Dist.—W. B. Hardman, M.D.....Commerce
Tenth Dist.—W. J. Cranston, M.D.....Milledgeville
Eleventh Dist.—A. G. Little, M.D.....Valdosta
Twelfth Dist.—E. T. Coleman, M.D.....Graymont

VICE-COUNCILORS

First Dist.—A. J. Mooney, M.D.....Statesboro
Second Dist.—C. K. Sharpe, M.D.....Arlington
Third Dist.—A. G. Chritenden, M.D.....Shellman
Fourth Dist.—T. S. Bailey, M.D.....Newnan
Fifth Dist.—F. K. Boland, M.D.....Atlanta
Sixth Dist.—J. H. Riley, M.D.....Haddock
Seventh Dist.—J. H. Hammond, M.D.....LaFayette
Eighth Dist.—E. G. Adams, M.D.....Greensboro
Ninth Dist.—J. S. Tankersley, M.D.....Ellijay
Tenth Dist.—G. L. Carpenter, M.D.....Wrens
Eleventh Dist.—J. G. Tuten, M.D.....Jesup
Twelfth Dist.—M. L. Currie, M.D.....Vidalia

STANDING COMMITTEES

Scientific Work

E. E. Murphey, M.D., Chairman.....Augusta

V. H. Bassett, M.D.....Savannah
W. C. Lyle, M.D., ex-officio.....Augusta

Medical Defense

M. A. Clark, M.D., Chairman.....Macon
J. N. Ellis, M.D.....Atlanta
E. T. Coleman, M.D.....Graymont
J. G. Dean, M.D.....Dawson
E. G. Jones, M.D.....Atlanta

Organization

T. J. McArthur, M.D., Chairman.....Cordele
G. R. White, M.D.....Savannah
W. B. Hardman, M.D.....Commerce

Public Policy and Legislation

J. R. Littleton, M.D., Chairman.....Augusta
W. L. Champion, M.D.....Atlanta
C. C. Harrold, M.D.....Macon
President and Secretary, ex-officio

Necrology

V. D. Lockhart, M.D., Chairman.....Maysville
W. B. Emery, M.D.....Atlanta
S. S. Smith, M.D.....Athens
M. F. Carson, M.D.....Griffin
J. M. Hull, M.D.....Augusta

Arrangements

(Committee to be selected by the Chatham
County Society)

Delegates to American Medical Association

W. H. Doughty, M.D.....Augusta
E. G. Ballenger, M.D. (alternate).....Atlanta
T. J. Charlton, M.D.....Savannah
T. R. Wright, M.D. (alternate).....Augusta

SANITATION IN SCHOOLS*

Dr. T. A. Mann,
Health Officer, Brunswick.

The problem of sanitation in schools is a problem of application rather than investigation. Practically speaking the sanitarian and the medical scientist are far in advance of school authorities in their efforts to better the health condition of our children. The ways and means of conserving the health of our young citizens during their school life have been very well worked out, but the application of measures toward this end are woefully neglected. The question of most practical importance to us at this time is not what

should be done, but how we are to get it done.

The people, themselves, through their school boards must carry out the measures. They must be willing to make adequate appropriations to carry out the work. They cannot expect to get something for nothing, for when they do this they either become parasites, taking that which saps the life from some one else or they get false returns. We should impress on our citizens the importance of adequate compensation for the teachers and medical inspectors in our schools. We can then get efficient service.

The teachers in our public schools are responsible, in a great measure, for the environmental characteristics of the citizens of the next generation. The stand-

*Read at meeting of Eleventh District Medical Society.

ards of the coming citizens will be measured by the efficiency of their teachers. It is false economy to pay small salaries for small calibered teachers. This question is pertinent in a discussion of sanitation in schools, for it is necessary to have teachers intelligent enough to grasp the principals of preventative medicine before we can make headway.

Sanitation in schools, properly speaking, includes measures which will lead to a sound mind and a sound body for each child.

We can best discuss the subject briefly under four heads, namely: communicable diseases, physical defects, physical culture, and fourth, school surroundings.

Communicable diseases can best be detected and eliminated by an efficient medical inspection. Medical inspection for the detection of communicable and contagious diseases is for a protection to the community and should be conducted by the Department of Health or at least with its co-operation because of the necessity for legal authority which must sometimes be used, not only during epidemics but also to prevent them. In cities where the school system is large enough to employ a physician for his whole time, the school board could effectually look after this branch of medical inspection, provided there is a spirit of co-operation with the Board of Health. In small cities and towns, however, the work of detecting contagious diseases can probably be best administered by the Board of Health. There should, however, be close and friendly relations with the school boards.

In smaller towns not larger than ten or twelve thousand inhabitants, the municipal health department and the Board of Education can by a co-operative plan employ the Health Officer for his whole time and in this way medical inspection of schools will become a part of the city health work. Brunswick, Georgia, is now doing this. The city health officer has his office in one of the public school buildings. This idea is unique, but since modern health work is to a great extent educational, it seems that such a plan affords a good opportunity for giving the rising generation the true conception of the prin-

ciples of public health work. With these plans the health department is thrown more closely in touch with the schools and the schools are afforded an excellent opportunity for detecting contagious diseases at an early stage.

The laboratory of the high school as is the case in Brunswick, can be the city laboratory, thus giving an opportunity for any community of one thousand inhabitants or more the benefit of that indispensable instrument in modern life, the microscope.

In thinking of the future of the child and his relation to society as a future citizen it is most important that we have medical inspection for the detection of physical defects. The blighting effect of adenoids, defects of the eyes, imperfect hearing, and in the South, hookworm infection is unquestionable, and if we neglect this work we not only do our children a grave injustice but we are really guilty of criminal negligence. This work should properly be under the supervision of the Board of Education rather than the Board of Health. It involves the constant attention of the teacher with reference to the seating of the child where he can see and hear to the best advantage, and in such a manner that postural deformities will not take place. Inspection for defective eyesight and adenoids should be made in the case of every child. In the south where hookworm infection is widely prevalent every child should be examined. It is not right to let the rising generation grow up under this handicap. Unfortunately our fathers and mothers did not know the cause of the wide-spread anemia in the South or the clay eaters anemia. We do know it, and we should leave no stone unturned to remove the cause, which is comparatively an easy task. We should not forget, however, that along our Atlantic border from Virginia to Florida, there exists another cause of anemia, namely: malarial fever, the final eradication of which must depend on extensive drainage, and scientific mosquito fighting. While this question is not directly connected with the schools and is partially a national problem, it is indirectly connected since school children in this terri-

tory cannot become 100 per cent efficient until this work is done.

Along with the examinations for adenoids and hookworm infection there should also be examinations of the eyes. Many backward children have brightened and kept pace with their companions after proper glasses have been put on.

In schools having a system of medical inspection the work of finding eye defects can be done by the inspector. In any case teachers should be taught the use of Snellin's Chart and when there is no medical inspector the teacher can make the tests and refer the child to the parents with recommendations for treatment.

The results of the examinations either by teachers or medical inspectors should be reported to the parents or guardians with a request to have the trouble relieved at once. Treatment should not be given by the school authorities except in the case of the poor, and then not until permission has been given by the parents or those in charge of the child.

The time may come when the state will assume a more strict responsibility for the school child, but until this time treatment of physical defects should be left to the parents.

Follow-up work should be done, however, and when parents do not seem to appreciate the importance of having the child looked after promptly, missionary work should be done on them. In this connection we are reminded of the work of a trained nurse in the schools. In the larger cities, such as New York, Philadelphia, Boston, Los Angeles, Grand Rapids, New Haven, Syracuse and Yonkers, school nurses are employed. In the follow-up work, they are very valuable. Dr. Harrington of Boston, said a few years ago, "It does not seem possible to conceive a more satisfactory arrangement or a more effective piece of machinery than the school nurse under school supervision." In smaller towns and cities a nurse under the supervision of the health department and the school board combined would be a good plan, provided the two departments are thoroughly co-operative.

Closely allied to medical inspection is the supervision of the physical growth of

the child through work and play. We will not discuss here the question of physical development through manual labor. We do not know what the future will bring forth in farm work, etc., in our primary schools, but at its best the work will be more or less mechanical. All labor in modern times tends to the mechanical, and our great manufacturing establishments of all kinds will in the near future have to supply outdoor playgrounds for the physical exercise of their employees. Some of them are already doing this. This tendency to mechanical work means a readjustment of the physiological functions of the individual in his relation to society. We have only to go back about one hundred years when for all time before the bulk of the world's work was done by human muscle. In the golden age of Greece—the age of Pericles—eight out of every ten of the people were slaves who labored. These conditions have changed. The bulk of the world's work is now not done with either human or animal muscle. Man has harnessed the great powers of nature. At this time the small stream and babbling brook are even made to give up some of the energy they have for centuries been wasting. The farmer uses them to light his house, to cook his food and even to milk his cows. Electricity, gas, and steam have taken the place of brawn.

To develop the physical man and woman of the future, we must resort to the other agency—play. We must not forget that "*mens sana in corpore sano*" is just as true today as it was when first spoken. We as medical men should encourage this truth and incidentally encourage the acquirement of more and better playgrounds. This should be done now, for if we wait, even our small towns and villages will before long experience the same difficulties as our larger cities are at present experiencing in purchasing such grounds.

Play, through school and college life, should be controlled by the institutions themselves. The physical directors should be educated men and take equal rank with men who teach in other departments.

Didactic teaching should not be neglect-

ted. It should be begun in the first grade and continued throughout the school and college life. If it is important that the state should supervise the mental development of our children it is also important that the state should supervise their physical development.

The people have already realized that it is economical to maintain good public schools. It will not be long before they will recognize the economy of public supervision of the physical development of the child through properly equipped playgrounds.

Finally we come to that phase of sanitation in schools which relates to school buildings and their surroundings. In the construction of school buildings there are two principles which should not be lost sight of; namely, proper light and ventilation. These principles do not depend on cost and can be applied either in cheap structures or in costly buildings. The question of heating is not so difficult in Georgia and other Southern states as in the North. In recent years there has been a tendency to teach in the open air. The results in Chicago and other cities of the North have shown this to be very successful. In the South open air teaching should be encouraged, since we have such favorable climatic conditions.

Teaching should be both by precept and example. School buildings should be models of cleanliness not only for the protection of the child, but a subject lesson for them to apply in their own homes. Brooms and dusters should be done away with in our schools. The scrubbing brush and the damp cloth should replace them. In communities where sewerage connections are available the closet fixtures should be of the most modern type. The closet should be kept scrupulously clean. The old sputum cornered room with immoral poetry on the walls does much harm and counterbalances the good effect of the didactic teaching on morals by the men who have control of these schools. Children in such an environment are much more apt to become indifferent citizens and with lower moral standards than when surrounded during their school life, by better conditions. When sewerage

connections are not available the sanitary closet should always be used. There is no worse sanitary condition than the improper disposal of human wastes. All of our hookworm infection and much of our typhoid fever comes from this source. Under no circumstances should a school board allow the open privy to exist. Play grounds and school surroundings should be models of cleanliness both as object lessons and as a safe-guard against disease. Teaching civics cannot be effective when the schools themselves do not set the example.

In a short discussion like this one cannot go into detail, nor is it necessary before a body of this kind. My object is to impress upon you the importance of these questions and to arouse your active interest in them, so that your influence may make itself felt before the School Boards of your various communities.

THE PREVENTION OF PELLAGRA*

Dr. H. F. Harris, Atlanta

There is perhaps no subject of medical character which is at present so much discussed by physicians, nor one which is occasioning more anxiety in the mind of the general public than that of pellagra. Nor is this wide interest without justification, for on account of the extreme gravity of this affection, for the reason that it maims both physically and mentally, and finally results in a frightful death, and that its affects are even conveyed to the helpless offsprings, the progeny of pellagrous parents, coupled with its great and increasing prevalence, all together make the subject one which should challenge the attention of the best thought in both lay and medical circles. Although the law creating the Georgia State Board of Health provides that its executive officer shall collect vital statistics, this end has been rendered wholly nugatory by the failure of our law makers to provide adequate funds for carrying on the work, and we are, therefore, in complete ignorance as to the degree of prevalence of this horrible disease

*Read at meeting of Eleventh District Medical Society.

in Georgia, and our ignorance in this particular is still further increased by the fact that the great bulk of our doctors have not as yet learned to recognize the disease in its earlier stages. All that we can say is that the disease is frightfully prevalent, and there is every reason to believe that it is becoming more and more so, and unless it is checked by the means now employed for this purpose in the enlightened countries of Europe, where it has existed for a much longer period than in America, there is every prospect that our country will suffer from its affects almost as greatly as has been the case in Spain, Italy, southern Austria, and Roumania. The foregoing facts are so well authenticated that no one who has any knowledge of the subject would think for a moment of contradicting them: accepting them as having a solid foundation, nothing could be of more importance to the southern people than to gird up their loins and grapple with the situation in the same spirit which our forefathers have so often defended their homes and firesides against any and all foes who have dared to threaten their well-being. But we must remember that this is a subtle foe. It does not strike openly in broad day light, in the sight of all men, but it robs our people of their bodily strength, and at the same time insidiously attacks the brain and destroys reason. With open, manly foes we have ever known how to deal, but with the secret but no less malignant enemy, which, while masquerading as the staff of life, poisons the well-spring of our being, we are but illy fitted to deal, but we must awaken to our danger before it is too late and fight cunning with cunning, for here mere brute strength avails but little, for only in this way will it be possible for us to ward off the great calamity which threatens our homes and loved ones. In order that this may be done effectually we must study the peculiarities of our dread enemy, and find how and in what manner he makes his approaches, making sure that he will not attack us in the front, but will ever be found skulking in the rear, ready to pounce upon his unsuspecting victim when the least opportunity offers. What then is this pellagra

of which we now speak? Whence does it come, and how does it attack? What is its true nature, and what are its effects? In order to answer these questions it will be necessary, and also interesting, to read a page from the past.

At just what time pellagra made its appearance among mankind will ever be shrouded in the deepest mystery. That the disease existed among the corn eating aborigines of North America, particularly in its southern portion, we have every reason to believe, since the affection exists among them even at the present time, and as the cause was unquestionably present there can be no doubt that the malady was old when Columbus first sighted our shores; but of its presence we have no authentic records.

As to the time when it appeared in Europe we are better informed, though it cannot be said that we possess any data of an exact character which show when the first case of pellagra occurred.

Inasmuch as all real investigators of the malady are at present in accord as to the view that pellagra is caused by the consumption of maize products, the history of this grain becomes linked by the closest ties to the disease, and it will, therefore, be necessary to trace the development of the culture of Indian corn in the old world in order that we may understand the slow but constant progress of the disease across a strip of southern Europe. Just at what time maize began to be grown in the old world is uncertain, though all authorities agree that the grain was first brought from the Island of St. Thomas to Spain, and that the inhabitants of this country began forthwith to cultivate it. In the celebrated work of Gaspard Bouhin, entitled "*Theatrum Botanicum*," published in 1668, this writer asserts that up to that time the principal cereal used in Europe, Asia and Africa was wheat, and if this be accepted as correct it is thus seen that maize could not have become the common food of the people in European countries before 1700 or perhaps somewhat later. This fact is wholly in accordance with our knowledge of the period in which pellagra began to appear in north-western Spain, for it was in the year 1735 that the

malady was first described by the eminent Spanish doctor Gaspard Casal, the private physician of Philippe V. Curiously enough Casal's memorable article on this subject was not published until 1762, which was after his death, and in the meantime the French physician Thierry, who had gone to Madrid as the physician to the ambassador of Louis XV., and to whom Casal had shown his article on the subject, published in France in 1755 what he had learned from his Spanish colleague. In the meantime, with characteristic indolence, the Spanish doctors seemed to have paid no further attention to the disease, and the next article appeared on the subject was by the Italian physician Frapolli in 1771, who had observed the malady in Lombardy. Quickly following this work numerous monographs on the subject of pellagra began to make their appearance in Italy—Odoardi having written in 1776, Zanetti in 1778, Alberti in 1779, Gherardini in 1780, Albera in 1781, and finally, from 1786 to 1789, appeared what are perhaps the most masterly articles which have ever been written on pellagra by Gaetano Strambio. Contemporaneously with and following Strambio's articles on the subject a host of publications made their appearance in Italy, the number being greater until a simple catalogue of them in 1880 by Salvarglio forms a respectable volume; though it must be remembered that this list includes a few monographs and articles on the subject written in France and other countries. In the beginning it was not known that the pellagra of Italy was the same malady which had been described by Casal in Spain, this writer having given to the affection the name of the "disease of the rose," by which the malady was generally known to the peasants of northern Spain where he first observed it. In 1798 the French physician Thouvenel, in his celebrated treatise on the "Climate of Italy" called attention to the resemblance between the two diseases, and thereafter it was soon recognized that they were one and the same. While the presence of pellagra in Italy was inciting to ever increasing observation and discussion the most prominent physicians of this marvel-

ously intellectual nation the disease had unnoticed gradually made its way into France, though it was not until 1818 that Hameau noticed the first case in that country, and it was not recognized until eleven years later, and until after he had seen a number of other cases that the disease with which he was confronted was actually pellagra—the probability of which was first pointed out by Dupuch—Lapointe, the secretary of the Royal Society of Medicine of Bordeaux, to which body Hameau had reported his cases under the title of "A Disease Little Known, Which was Observed in the Neighborhood of Teste." Following the publication of the observations of Hameau we find that a number of articles by French physicians made their appearance in the years which followed, by far the most remarkable of which was the work on pellagra published by Thiophile Roussel in 1845, to be followed 21 years later by his monumental "Treatise on Pellagra." With the exception of the works of Roussel no writings in French are of the first importance so far as adding to our knowledge of pellagra, though one phase of the subject, which has in the past and still exerts considerable influence concerning our conception of its causation was thoroughly gone into and elaborately discussed by Roussel and several other French writers. The matter to which I refer is the claim which was loudly made in France about the middle of the last century that pellagra often occurs unassociated with the consumption of maize and its products, this view being championed by Landouzy and Bouchard with their "sporadic pellagra" on the one hand, and by Billod with his "pellagra of the insane" on the other. Time will not permit even a short discussion of the principal facts brought out in the polemic between the writers just referred to and the great master pellagrolologist Roussel, for notwithstanding the fact that all three of the gentlemen first referred to wrote books in which their views were maintained it was the universal consensus of the best medical opinion in France and Italy that they had entirely failed to make good their contentions, and from

that time to this we have heard less and less concerning pellagra without corn, until at the present time it is only maintained here and there by sensational and irresponsible persons, who, without knowledge of the subject and with an ambition to be regarded as authorities, make for the cause of confusion by asserting the contrary. Such individuals I cannot help but class in my own mind as belonging to that small and vanishing minority who claim the world is flat, and who are usually so contentious that they remind one of what Robert Louis Stevenson said when he heard of the death of Matthew Arnold,—this great writer, pausing for a moment and then exclaiming solemnly, "He were not like God." In this connection I do not refer to many laymen and even physicians in our own country who, while not posing as authorities, quite honestly and with apparent backing for their beliefs, hold to the view that corn is not necessary to produce pellagra,—of such I can only say that they have not had the time or opportunities to thoroughly inform themselves concerning the full facts in the case. Fortunately for France the pellagra chapter of its history may be said at the present time to have finally closed, since this intelligent race, acting upon the teachings of Roussel, have, by diminishing the cultivation of corn and taking the precautions suggested by him and his Italian conferees, caused the gradual eradication of the disease, and at this moment it is said that not a single case now exists which originated in France.

In 1858 Theodori published a paper in which he announced that pellagra was epidemic in Moldavia, though it is probable that the disease had existed in this country for quite a period prior to the publication of his paper,—the French traveler Dr. Caillat having spoken of a case, which was in all probability one of this disease, seen on a visit to that country in 1847. Since the publication of Theodori's paper many articles have appeared showing the great prevalence of pellagra in the provinces bordering on the Danube and in Southern Austria, and in 1866 Typaldos showed that the malady

was epidemic in the Island of Corfu, where the only bread eaten by the inhabitants is made from maize. Still more recently, in 1898, Sandwith showed that pellagra was epidemic in Egypt, again only in such districts where maize and its products form the principal bread stuffs of the inhabitants. The foregoing constitutes an extremely brief outline of the incidence of pellagra in the old world, and while the facts are interesting, it was not simply on account of this that I call your attention to them, but in order that I may compare our records of the time when pellagra was first noted with those concerning the introduction of maize in Europe.

As has been before stated, the first introduction of Indian corn into the old world was into western Spain by the Spaniards, but the period at which this occurred is necessarily a matter of conjecture in the absence of all written records concerning it. We can only know that its use could not have become common before 1700 or perhaps later, and conjoined with this knowledge we find that pellagra is already an epidemic disease and has undoubtedly existed for a considerable period in western Spain in the year 1735.

As regards Italy, fortunately, our knowledge is more exact. Zannon has made most minute resarches into the archives of the towns of the Province of Venice, and he finds no mention was made of maize until after 1620, and then and in succeeding years rarely referred to, clearly showing that it had not become one of the staple foods of commerce. Facheris, as the result of similar investigations, showed that maize was first imported into the Province of Bergamo in 1862, and that in the same year it was first planted in some of the communities of the Province of Gandino. Marzari found that the first mention of the grain in the Province of Treviso bears the date of Jan. 16, 1686, and Sette, from a careful investigation of the records of the church properties of the State of Venice, demonstrates that it was not until about 1700 that Indian corn began to figure at all prominently among the agricultural

products and to give a revenue. In 1710 this American grain began to figure in notable quantities in the markets at Milan, and it was 1774 before any mention is made of a sale of the grain in the markets of the town of Brescia. From the foregoing facts it becomes plain that maize products did not become a common food in Italy until after the year 1700, it being not far from the truth to say that it did not become the staple article of diet of the inhabitants of this region until about 1750, and we find that Frapolli first discovers that the disease is present in 1771, though we should not fail to mention the fact that it was asserted by reputable physicians that the malady had existed for a considerable period before. In particular one doctor of prominence, whose father and grandfather were both physicians, made the assertion that the disease was frequently encountered by his father about 1750, and by his grandfather occasionally before that period.

In France corn began to be raised during the reign of Henry II., which was toward the close of the sixteenth century. The cultivation of the grain for many reasons gained very slowly in France, however, and the records abundantly show that it was not until the eighteenth century that it became of any particular importance, with the exception of the Province of Bearn, in which its general cultivation began a few years earlier. In the Province of Aude—where pellagra formerly occurred to a certain extent—it was not until after 1760 that Indian corn was raised to any considerable extent. As shown by the writings of the celebrated English traveler, Arthur Young, the cultivation of maize was very common in France in 1790, and it may be taken for granted that from this time on until about 1850 was the period during which it was the common cereal of parts of that country, and it was precisely at this time that pellagra began to be observed and during which it flourished. In speaking of the correspondence between the general cultivation and consumption of maize and the incidence of pellagra the celebrated Roussel, in his first book on this disease, says, "On analyzing this

short history of pellagra in the kingdom do we not find an exact correlation—a correlation which I would almost say absolute—not only between the epoch when the American grain became the popular food and that in which pellagra developed, but also between the quantity of maize which was consumed in a province and the degree of development of the malady and the number of its victims?"

But time will not permit my going into this subject further. I would only remark in conclusion that corn was first introduced into the provinces of the Danube in 1710 and that pellagra existed about 1750.

Before closing this part of the discussion I would remark that notwithstanding occasional ill founded claims to the contrary pellagra did not exist in the old world before the introduction of corn, as has been proven by abundant testimony, and it has only existed among those peoples who have consumed it very largely or, as has been the case in Italy and in the provinces of the Danube, exclusively for many years.

It is hardly necessary to mention that the disease has long been known to exist in Mexico, and that we have every reason to believe that it has been present, though usually in a mild form heretofore, in the southern states for a long time. It is thus seen that there is the closest relationship between maize and pellagra, but some words of explanation are necessary in order to understand the conditions under which this cereal produces the disease.

It has never been claimed by any one of authority that products made from perfectly sound corn are hurtful, though there is a bare possibility that even the best grain contains a certain amount of some deleterious substance. Since the epoch-making work of Ballardini in 1845 it has been universally accepted by all of those best qualified to judge that the deleterious action of corn is the consequence of fermentative changes occurring within the grain, producing the condition which is ordinarily spoken of as rottenness; an immense number of experiments have been made which go to show that extracts made from corn in this condition are

harmful to animals, as is well known to every agriculturalist that the grain in a state of this kind is an active and deadly poison to horses.

Within recent years an Italian called Romaro has advanced the ingenious theory that the poison of maize is not produced by fermentation, that is of growth of germs within it, but that it is the consequence of certain alterations that occur in the grain in the spring which precede germination. As an example of this he cites the deadly poison solanine, which is produced in potatoes when they begin to sprout, though of course, it occurs in only small quantities, but is sufficiently present to produce symptoms if large quantities of potatoes be eaten in this state, and would doubtless result in a chronic poisoning should they be taken for any long period of time. The general appearance of the external symptoms of pellagra in the spring would add color to Romaro's views, and it is certainly of the first importance that their truth be thoroughly tested, though this has not so far been done. Owing to the fact that pellagra in America has increased greatly in severity and in the number of its victims within recent years, it has occurred to me that this be the consequence of the prevalent custom in the west of cutting the entire stalk of the corn while in the fodder pulling stage, piling it up in shocks, and leaving it exposed to the vicissitudes of the weather for considerable periods of time. As the winter advances and we consume our home supply it is well-known that we draw from the sources just referred to, and this corn, which may be said to have been killed before it was entirely ripe, is shipped down here to us, and according to the universal testimony of grain merchants it is often in a most deplorable condition of fermentation and decay. This view is in no sense original with me, but is only applied to our peculiar conditions here, since all writers from the time of Marzari—who first strongly advanced the theory that maize was the cause of pellagra—have insisted that corn which was killed by the frost before it was ripe was largely responsible for the trouble in Italy. I may add that

it is believed by Prof. Vanatter, of our State Agricultural School, who is unquestionably an original and able investigator on the subject of maize, informs me that the western corn is of low vitality, as proven by planting experiments, and that often a very large percentage of the grain put in the ground fails to sprout. Whatever may be the particular character of the change in the corn which results in poisons being produced, there is overwhelming evidence going to show that the cause of pellagra lies in some change and we should use every effort to see to it that only maize in first-class condition comes within our borders, and such stringent laws and regulations should be passed and enforced as to make it impossible for bad corn to appear in our markets.

Before closing my remarks on this subject I would call attention to one phase of pellagra, an understanding of which is necessary in order that we may thoroughly comprehend the true nature of this disease. The poison of bad maize produces extremely slow destruction of the nerve cells and nerve fibers which go to make up the active and essential portions of our nervous system, scar-tissue taking the place of these elements after they have disappeared. The process being extremely gradual, the patient notices no symptoms for a long time, perhaps a period of many years intervening between the beginning changes in the brain and spinal cord and the occurrence of the first symptoms. Changes of the kind to which I have just referred are necessarily permanent, it being no more possible to make new nerve cells, take away the scar-tissue, and put newly formed nerve elements into its place than it would be to grow back an arm or leg after it was amputated. The necessary amount of change in the nervous system having been produced, it is not essential thereafter for the unfortunate victims to continue the use of corn in order to have symptoms of pellagra, since the external manifestations of the disease which constitute the clinical picture of the malady are the result not of an acute intoxication, but follow as a consequence of the changes in the brain and cord and sympathetic ganglia, and may occur many

years after the individual has entirely ceased to eat corn products. I wish it clearly understood then that I do not regard the symptoms which we call those of pellagra as being the direct result of eating corn, but they are the consequence of the changes in the nervous system previously produced by the maize poison, and may be called forth at any time by depressing influences, though it is not improbable that the slight general deterioration of vitality produced by the consumption of considerable quantities of bad maize is particularly prone to call forth the symptoms. From the foregoing it is also easily understood that all of the best writers agree that there are no drugs which exert any marked influence over the course of this disease, since it would, of course, be impossible to get a rejuvenated nervous system by means of this kind; the sheet anchor of the treatment of the disease is rest and putting the patient under such favorable hygienic conditions of every character that his nervous system may be strengthened to the point where it can carry on the functions of life properly, and with this will come a cessation of the external symptoms and the patient will be restored to a condition which approaches health for the time being. This conception likewise makes clear the reason for the much greater severity of pellagra in some parts of the old world than with us, for in northern Italy and in some of the provinces of the Danube this grain constitutes the entire bread supply of the people, and almost their entire food of every character, and as the seasons there are usually short, resulting in the grain being killed by the frost before ripening, and as the climate is humid and favorable to the fermentative changes in the grain after being stored, we can well understand that our old world neighbors suffered much more severely than we Americans, in whose dietary corn products play but a minor role.

The objection is frequently made that it cannot be believed that corn should, of all foods given us by the Almighty, alone contain deleterious substances. To such objections I would urge that those re-

sponsible for them have certainly failed to give the subject proper consideration. Everyone is acquainted with the fact that decaying meats, and particularly sea food which has undergone putractive change, are highly poisonous as a consequence of the production in them of substances called ptomaines; this is precisely what we say about corn, it not being poisonous in the beginning in all probability, but having formed within it, as the result of putractive changes, substances that are hurtful to the human economy. In quite a similar way it is well established that changes may be produced in rice, as the result of which a poison or poisons are produced, which, when taken into the human body, produce the frightful malady known as beriberi or kakke, this disease being extremely common in the East, and like pellagra being an affection primarily of the nervous system. Similarly we have acrodynia—also a disease of the nervous system—which has prevailed from time to time in Europe, and which was shown to be the result of consuming fermented wheat. Likewise we have lathyrismus, a malady produced by eating rotten leguminous foods like peas and beans, and this also is a disease which produces most severe alterations in the central nervous system. Nor is one nearer the truth who assumes that we would not be given by nature an article of diet in every way fitted for the use of man which contained at the same time a deleterious substance, for nothing is better known than that the cassava starch is accompanied in the plant by the deadly prussic acid, and that before the edible portions of the plant can be employed for food the poison must be removed. It is well known that a number of plants in southern Europe have been frequently used as food which also contain deleterious ingredients, and have not uncommonly produced even fatal diseases as a consequence of their consumption. But time will not permit a further discussion of this subject. To thoroughly penetrate all of its intricacies would require years of close study, but I trust I have said enough to clearly point to the very strong probability that pellagra is the consequence of the eating of maize products,

probably in a state of more or less fermentation, and that even with evidence not so strong the terrible character of this disease would make it incumbent upon us to wage at once a relentless war on all corn products not in a perfectly sound condition, leaving in the meantime any doubts which may exist on the subject to the final judgment of the many able and painstaking men who are at this moment ceaselessly laboring to make the whole matter clear.

In conclusion permit me to beseech all those within the hearing of my voice to use their best efforts toward controlling the sale of corn in our state, for even if we are so far led astray as to believe that pellagra is caused by some other agency no sane man could wish to pay his hard earned dollars for rotten grain, and I beg of you, as you care for the welfare of your loved ones, to give us your aid in this matter, whether you do so on one ground or the other.

SANITATION IN THE HOME*

J. R. McMichael, M. D., Quitman.

When medical men are gathered together on occasions such as this, for the discussion of subjects that will be of mutual benefit, we must be mindful of the silent influence of those great laborers in medicine who have preceded us. They gave us the knowledge that helps us to deal with the problems of sanitation. If it is a difficult task for us to teach its gospel, how much more difficult it must have been for them to prove its truthfulness. This thought is so beautifully expressed by some author who says, "What we know and what we think is not a new fountain gushing fresh from the barren rock of the unknown at the strike of the rod of our own intellect; it is the stream which flows by us, and thru us, fed by far off rivulets of long ago." 'Tis then our duty, as tenders of our people's health, to see that this stream of knowledge of home sanitation is not hindered

by us, but that its bulk and progress is increased by rivulets from us.

It has been said that the historian of the future, when recording the accomplishments of the decade in which we are now living, will no doubt call it the sanitary renaissance. It is a period in which the philanthropic and public spirited are manifesting a wide spread desire to improve the conditions under which men and women live and work. Primarily the movement was begun from a sense of commercialism, or because of its economic importance. Every town's, city's, county's or state's prosperity is influenced by its sanitation. The medical men have certainly done their part in arousing these respective units of government. In fact, some of our expert sanitarians have devoted their entire time to this cause; some have given up their lives for it. Yet one of the units of government, the basic unit, the first and most essential unit has been neglected. This is the home. As a rule, in remedying any evil, we try to begin at the fountain head—the home is certainly the fountain head of our system of government. And with sanitary homes—as a natural consequence, the other units of government will become more sanitary.

Sanitation in the home then should be our battle cry. To obtain it is no weaklings fight. 'Tis a fight for strong men, and it is the duty of the medical profession to produce these men. For we will make this fight without the hope of a financial reward. In fact, we will make it knowing, that, when home sanitation is effective, our incomes will be reduced.

Some great teacher has said that the highest reward a good man could wish for is the opportunity for service. The history of our profession teaches that, in its rank, such men have always been found. We have these men today, and THESE MEN are the ones who are going to perfect sanitation in the home, and, in doing so, will be among those who will make the age in which we are now living one of sanitary renaissance.

I state without fear of contradiction that one half of the practice of the average doctor in our section is a result of unsanitary homes. This being true, we cer-

*Read at meeting of Eleventh District Medical Society.

tainly can not justly be accused of trying to better our condition by aiding the undertaking for better home sanitation.

The key to the situation is in education. Educating our people to a higher standard in the construction, the equipment and the cleanliness of their homes. In the construction of a home, sanitation as well as architectural beauty, should be considered in the plan—a standard of sunshine and fresh air should be applied to each room of the house. The dark closet without ventilation, should be a thing relegated to the dark ages. The figures would be staggering that are necessary to state the number of germs that have been harboured for months in unventilated closets, on clothing or toys, and later brought out and placed in contact with the unsuspecting child with the result that its life is taken away. Most of the house-hold pests love darkness; they stay with us because we add these dark rooms to our home. So never again the unventilated closet.

Screening a house is as essential as any other part of its construction. During the past five years I have treated over 1000 cases of malaria. Less than 2 per cent were in screened homes. Less than 5 per cent. of my typhoid cases were in screened homes. Is this not convincing?

At Jacksonville last week Dr. Dowling quoted Dr. Hutchinson as stating that he had proven conclusively that three cases of syphilis had been transmitted by the fly and mosquito. Let us teach our people to screen their homes. Let us teach them that more windows are necessary, and that more open windows are a greater necessity. Of course, a good sewerage system is an essential feature on the construction.

So much for the construction. It seems to me that the man who devised the average home furnishings had the welfare of the family doctor at heart. Fixed floor coverings, tapestry, the feather duster, and even the large carved bed-stead the imposing, has helped the medical men.

The old field-sage broom (and later the more elegant looking broom with the wooden handle) has caused many back-

aches and swept up lots of germs to make dollars for the deserving doctor.

So lets do away with these retainers, spreaders and dissimulators of germs. These things are rapidly passing out. We should help their progress.

We always isolate our infectious diseases. We try to cut off every avenue from the non-infected. Do we always remember that the pet cat, or the pet dog might keep this avenue open?

We tell our people to disinfect the room, clothing, etc., after contagious or infectious diseases. Here we should go into detail, we should see that proper disinfection is done. If necessary we should do it ourselves. The sulphur candle is a farce. The Formaldehyde generator, or the permanganate combination will do the work.

We should insist that sanitation should be included in the course of study in every school. If necessary some of the present studies may be left off, they are great mind trainers, but a knowledge of sanitation is life saving.

In making visits into the homes, after we have given our pills and powders, let us look around and see if the illness is due to an error in sanitation, and if so, suggest a remedy. This will often require courage, but our mission is one of prevention as well as cure.

The Associated Press simplifies and condenses this question of house pest in the following "Poetry on Pests":

A lonely microbe disheartened and ready to die because the Public Health Service is rapidly putting all his ilk where they can do humanity no harm, peeked over the edge of Assistant Surgeon Rucker's desk today and heard the doctor humming a ditty that went like this:

"A fly and a flea, a mosquito and a louse
All lived together in a very dirty house;
The flea spread the plague and the skeeter spread
the chills—
All worked together to make undertakers' bills.
The fly spread typhoid and the louse spread ty-
phus, too;
Folks in that house were a mighty sickly crew.
Along came a man, and he cleaned up the house—
He screened out the skeeters and swatted the
louse;
The fly and the flea he cracked on the wall—
Now the people in that house are never sick at
all."

"Well," piped the microbe, "that's all very well as far as it goes, but it strikes me you've been a bit partial in the thing. How about the bed-bug? Where does he get off?"

"He's going to get off very soon, returned the doctor. So far the bed-bug has been able to prove an alibi, but I've put the sanitary detective on his trail and I'll get him yet."

Whereupon the microbe, seeing the jig was up committed suicide by jumping in the ink-well."

Teach home sanitation on your daily visits—by its teaching you save anguish and heart-aches, you make men and women happy, and in so doing you are made happy.

HISTORY OF THE OBSTETRIC FORCEPS.

A. J. Kilpatrick, M.D., Augusta.

"But yf of all these medicines profite not, then must be used more severe and hard remedies with instruments as hookes, tongues, and such other thynges made for the nonce. And fyrst, the woman muste be layde along upright, the middle part of her body lying hier than all the rest, companyed with women assisting her about, to comfort her and to keep her downe, that when the birth is plucked out she rise not withall. Then let the Mydwyfe annoyant her lefte hande with the oyle of white Lillies, or other that may make it soopple and smothe, and holding out her fingers, shutting together her hand, let her put it into the Matrix to feele and perceyve after what fashion the dead byrth lyeth in the Mother's wombe, so that she may the better put in hookes and such other instruments to plucke it out withall. Yf it be that it lye the head forward, then fasten a hooke eyther uppon one of the eyes of it," &c. &c.

The volume from which this quotation of quaint old English was taken, was edited by Thomas Rainald, 1565, and was called the "Woman's Booke or Bythe of Mankynds," and it well shows what no-

tions of midwifery were entertained in the glorious reign of Queen Elizabeth. The Elizabethan age was almost unequaled in literature as was illustrated by the genius of Shakespeare, Spenser, Bacon, Sydney and Raleigh. What a sad commentary upon obstetric medicine as compared to literature.

I introduce this subject with the above quotation in order to bring to our minds at one stroke, the fact that many and varied were the devices used in earlier days to complete delivery when nature failed. But unhappily all thees instruments were constructed with the sole view and intention of being useful to the mother and had no applicability to the child except to extract it, after depriving it of existence, or even draw it forth from the womb still palpitating with the life and presenting the most shocking spectacle of mutilation and distress. The Hook of various patterns was the favorite instrument—some possessing one prong, some two, some three. Hippocrates was the proud possessor of one of these instruments to remove the foetus from the mother; Soranus among his seven instruments for craniotomy possessed a hook; Celsus also had a hook; and in the ruins of Pompeii such hooks were found among exhumed instruments. Craniotomy was the one operation in which the physician seemed to have a special skill. After the time of Christ we find a more complete record. The Arabian physician Avicenna, born about 980 A. D., whose "System of Medicine" was for five centuries recognized as the highest authority in the schools of Europe, patterned his own hooks and expressed the possibility of delivering a living child with them. In his work will be found the first notice of an instrument called the "forceps."

Albucasis, another famous Arabic physician about 1100 A. D., described numerous instruments to facilitate delivery, among them a long and short forceps.

It is sufficiently clear that these inventions were intended to supercede the necessity of opening the foetal skull and to obviate the fastening of hooks upon the external surface of the scalp, which were constantly slipping or tearing their hold to the serious injury of the mother.

It is not believed, however, that Albucasis idea was to deliver a living child for both his forceps, short and long, were armed with a sharp, beaked point at the extremity of each blade and projecting teeth on the internal surface so that the integument of the child's head and face must of necessity have been badly lacerated. Furthermore, he gives directions that if the head be too large to pass it must be crushed by simply closing the blades. Barely to look over some of the plates representing the obstetric forceps is sufficient to produce a shudder in anyone familiar with the difficulties met with in parturition, and the instruments which were the boast of the inventors serve but to set forth more signally, by comparison, the eminent usefulness of the modern forceps. We find no mention of the obstetric forceps from the time of Albucasis until the year 1554, when Rueffe of Zurich, in a work dedicated a chapter to the consideration of obstetric instruments. In this treatise he described two kinds of forceps. The one with the beaked extremity and armed with teeth and the other perfectly smooth, and unarmed, which latter he demonstrates as "forceps qua dentes erununter." This is the first attempt recorded of any obstetric instrument (except the fillet) by which it was possible to extract the foetus without injury to its person. From the cut of this instrument it was very similar to the common lithotomy forceps with the exception of the internal surface of the blades being smooth.

This was the first expression of the inoffensive and conservative function of the forceps and possessed in an undeveloped form the essential character of the modern instrument. The cephalic portion of the blade was expended to cover a considerable portion of the head, the blades crossed and the handles adapted for a firm grip. Like all preceding forceps, however, it possessed a fixed joint so that both blades must necessarily be introduced at the same time and consequently were well nigh useless from the difficulty of its application. The true obstetric forceps was devised in the latter part of the 16th, or the beginning of the 17th, Century by a member of the Chamberlen family then

residents of England. The invention was not made public at the time but was preserved as a family secret through four generations, and did not become generally known until the early part of the 18th, century.

Prior to this time Version had been the only method which permitted the artificial delivery of an un mutilated child, and accordingly when that operation was out of the question, and delivery became imperative, it could be accomplished only by destruction of the child which was accomplished by means of hooks, crotchets, forceps armed with spikes or teeth, as has been previously mentioned. William Chamberlen, the founder of the family was a French physician, who fled from France as a Huguenot refugee and landed at South Hampton in 1569. From this William Chamberlen descended no less than nine Doctor Chamberlens who had access to the family secret. Various authorities that I have had access to differ as to which of the Chamberlens was the inventor. There were three Doctor Peter Chamberlens and fully one half of the historians upon this subject claim the elder Peter to be the inventor. This is immaterial to us but it is reasonable to suppose the first Chamberlen the one, as the instrument is known to have been in their possession exclusively for more than 100 years. A short straight forceps possessing a cephalic curve was common property even before the time of the Chamberlens, but this instrument possessed an immovable lock and therefore was almost impossible of application.

Chamberlen's discovery consisted simply in separating the blades, introducing them singly and fixing them after their application. After adaptation the blades were held in place by tape wound tightly between the handles and blades, where the halves crossed.

The absence of the pelvic curve and shank prove conclusively that the Chamberlens practiced nothing but the low forceps operation.

There is no doubt of ability and high standing of this family of famous physicians for they practically controlled the midwifery practice of England and were

in constant demand by the Royal heads of Europe for four generations. Hugh Chamberlen, 1630 to 1706, one of the third generation was forced to leave England on account of some political views. He fled to Paris in 1673, and while there attempted to sell the family secret to the famous French physician, Mauriceau, claiming that by its means he could deliver in a very few minutes the most difficult case. Mauriceau placed at his disposal a rachitic dwarf whom he had been unable to deliver and after several hours of strenuous effort was likewise obliged to acknowledge his failure. He afterwards returned to England and was again recognized as authority on midwifery, resuming his lectures to the midwives of London.

Upon his return to England he brought with him a copy of Mauriceau's works on "Woman with child and in childbed" which he translated into English, and in one of his lectures to the London midwives commended the work to them.

This lecture has a direct bearing upon our subject, therefore I will quote him at length, for it is a rare contribution to medical history and gives in his own words his selfish reasons for guarding the family secret—the Chamberlen forceps. The following are his words:

"Having long observed the great want of necessary directions how to govern women with child, and in childbed, and also how new born babes should be well ordered I designed a small manual to that purpose; but meeting, some time after in France, with treatise of Mauriceau (which, in my opinion far exceeds all former authors, especially Culpeper, Sharp, Speculum Matricis, Sermon, &c., being less erroneous, and enriched with divers new observations) I changed my resolutions into that of translating him; whom I need not much commend, because he is fortified with the approbation of the wardens of the Chirurgens' Company of Paris.

"His anatomy was in the first edition omitted, but is in this; which with the book, I have carefully rendered into English, for the benefit of our midwives; of whom many yet very well admit of an additional knowledge. The principal thing worthy their observation in this book is,

accurately to discover what is properly their work, and when it is necessary to send for advice and assistance, that so, many women and children may be preserved that now perish for want of seasonable help. My author makes out the breaking of the right waters, for the proper season of a natural delivery, and whenever a child is not born then, or soon after, nature is so much short of performing her office. This is certainly a great truth; and all wrong births should never be longer delayed; and for the most part floodings and convulsions not so long; lest the woman lose her life before ever the water breaks; but if no dangerous accident intervene, in a right labor, one may lengthen out their expectation to twelve hours after; and though some may have been happily delivered twenty-four hours after, or two days, after, yet I should not advise any to run that hazard, provided they can have an expert artist to deliver them, without destroying the child; because many have perished in that case; and it is not prudent to venture, where but one of many escapes. For the longer the labor continues after the breaking of the waters, the weaker both woman and child grow, and the drier her body, which renders the birth more difficult; and 'tis ever good taking time by the foretop.

"And that midwife's skill is certainly the greatest, and she deserves most commendation, who can soonest discover the success of the labor, and accordingly either wait with patience; or timely send for advice and help. Nor can it be so great a discredit to a midwife (let some of them imagine what they please) to have a woman or child saved by a man's assistance, as to suffer either to die under her own hand although delivered. For, that midwife mistakes her office that thinks she hath performed it, by only laying the woman; because her principal duty is to take care that she and her child be well, with safety and convenient speed, parted; and if this be impossible for her and feasible by another, it will justify her better to waive her imaginary reputation, and to send for help to save the woman and child, than to let any perish, when possible to be prevented; as in the case of my author's

sister, and in the twentieth chapter of the first book. Yet in countries and places where help and good advice is not seasonably to be had, midwives are compelled to do their best, as God shall enable them; which dangerous and uncertain trials it doth not become them to put in practice upon women, where, no timely assistance need be wanting. Most wrong births, with or without pain; all floodings with clods, though little or no pain, whether at full time or not; all convulsions and many first labors; and some others, though the child be right, if little or no pain, after the breaking of the waters, and the child's not following them in some six or ten hours after, require the good advice of, and, peradventure, speedy delivery by expert physicians in this practice; for though a few may escape in these cases, yet the far greater number perish, if not aided by them. Let me therefore advise the good women, not so readily to blame those midwives who are not backward, in dangerous cases, to desire advice, lest it cost them dear, by discouraging, and forcing them to presume beyond their knowledge or strength, especially when too many are not over-confident.

"Those few things wherein I dissent from my author, if of dangerous consequence, are noted in the margin; if not, are left to the discretion of the reader.

"I confess he is often too prolix; a fault which the French much affected; however, I choose rather to translate him according to his own style, than contract him; and also to leave unaltered some things not very well expressed, being of small amount. I find also he distinguishes not between the words plaister and ointment, but uses them promiscuously one for the other.

"In the seventeenth chapter of the second book, my author justifies the fastening of hooks in the head of the child that comes right and yet because of some difficulty or disproportion cannot pass; which I confess has been, and is yet the practice of the most expert artists in midwifery, not only in England, but throughout Europe, and has much caused the report, that where a man comes, one or both must necessarily die; and is the reason of forbear-

ing to send, till the child is dead or the mother dying. But I can neither approve of that practice nor those delays; because my father, brothers and myself (though none else in Europe as I know) have, by God's blessing, and our industry, attained to and long-practiced a way to deliver women in this case, without any prejudice to them or their infants; though all others (being obliged, for want of such an expedient, to use the common way) do, and must endanger, if not destroy one or both with hooks. By this manual operation, a labor may be dispatched (on the least difficulty), with fewer pains, and sooner, to the great advantage and without danger, both of woman and child. If, therefore, the use of hooks by physicians and chirurgeons be condemned (without thereto necessitated through some monstrous birth), we can much less approve of a midwife's using them, as some in England boast they do; which rash presumption, in France, would call them in question for their lives.

"In the fifteenth chapter of this book, my author proposes the conveying of sharp instruments into the womb, to extract a head, which is a dangerous operation, and may be much better done by our fore-mentioned art, as also the inconvenience and hazard of a child dying thereby prevented, which he supposes in the twenty-seventh chapter of this second book.

"I will now take leave to offer an apology for not publishing the secret I mention we have to extract children without hooks, where other artists use them, viz., there being my father and two brothers living, that practise this art, I cannot esteem it my own to dispose of, nor publish it without injury to them; and I think I have not been unserviceable to my own country, although I do but inform them that the fore-mentioned three persons of our family, and myself, can serve them in those extremities, with greater safety than others.

"I design not this work to encourage any to practice it who were not bred up to it; for it will hardly make a midwife, though it may easily mend a bad one. Notwithstanding I recommend it to the perusal of all such women as are careful of their own and their friends' safeties, there be-

ing many things in it worth their noting; and designing it chiefly for the female sex, I have not troubled myself to oppose or comment upon any physical or philosophical position my author proposes. I hope no good midwife will blame me or my author for reprehending the faults of bad ones, who are only aimed at, and admonished in this work; and I am confident none but the guilty will be concerned, and take it to themselves, which I desire they may, and amend. Farewell.

“HUGH CHAMBERLEN.”

Many explanations have been given as to how this instrument lost its secrecy and came into general use. It would be a waste of time to rehearse even a few of these theories, some of them clothed in scandal. Let us be charitable and remember that the spirit of the age countenanced secrecy in the profession and that time alone was necessary to bring about a more cordial and united effort in the interest of suffering humanity.

The forceps came into general use in England during the life time of Hugh Chamberlen, Jr., son of the above mentioned Hugh, 1664 to 1728. Chapman in his writing of 1733 says: “The secret mentioned by Dr. Chamberlen was the use of the forceps now well known by all the principle men of the profession, both in town and country.”

The Chamberlen forceps was used exclusively but with little modification until the middle of the 18th century, when Levrett in 1747 and Smellie in 1751, quite independently of one another, added the pelvic curve and increased the length of the instrument. It is from these two that the long forceps of the present day is descended with its various modifications. It was considerably over a century from the time of Leverett and Smellie when Tarnier 1877 enunciated, the principle of “axis-traction” which has since practically revolutionized our ideas upon the subject.

Are you, as a member of the Medical Association of Georgia, doing all you can to further the interests of the organization?

TREATMENT OF TYPHOID FEVER*

S. T. Revell, M.D., Louisville.

“Typhoid Fever is a Protean disease, whether considered in its clinical, its pathological or its bacteriological aspects.”—Flexner. It may be defined as an acute general infectious disease, caused by the bacillus of Eberth, and characterized by an involvement of the lymphoid tissue, usually with hyperplasia and ulceration of Peyer’s patches, enlargement of the spleen, together with parenchymatous changes, in the kidneys and other organs.

The organism was first discovered in 1880, by Eberth, but it remained for Gaffky to isolate it in pure culture, and to establish definitely its pathogenicity in typhoid fever.

In nearly every instance, the gastrointestinal canal is the portal of invasion, though some authorities claim that the bacillus, sometimes, gains entrance through the tonsils. Typhoid may be said to be almost a universal disease, and in most parts of this country, it is endemic. It is most prevalent during the late summer and autumn months, though it may occur at any season of the year. It occurs at all ages, though young adults are most commonly effected.

Death is due to the effects of the toxemia upon the heart and nervous system, or to one of the many complications, as hemorrhage or perforation, etc.

In order that the disease may be prevented, it is, of course, necessary to know first how it is distributed. So far as we know the bacteria leave the patient only through the excreta, sputum, urine and feces. An endless amount of discussion has arisen as to the length of time the bacillus can live outside the human body, but suffice to say, it is of a short duration.

To prevent infection, certain procedures are open:—1st, the control of the water and food supply; 2d, the prevention of the distribution of infected material; 3d, the artificial immunization of those exposed to the contagion.

*Read at meeting of Medical Association of Georgia, Augusta, April, 1912.

The first division brings up the domain of sanitary science, and it is obvious that in a paper of this character it is impossible to enter into the various details of this very important subject. Practically, no community in this country is free from a certain amount of danger, and the careful control and inspection of the water supply is a most important element. It is unnecessary to refer to the great epidemics that have been, definitely, traced to this source, or the diminution in the number of cases, when the cause has been removed. Almost insurmountable difficulties are met in the attempt to inspect and control the water supply of a great many of the larger cities, and it is even more of a task, in small towns and rural districts. In all localities, when the disease is prevalent, it is very essential that the water be boiled, but even when this is done, there are many sources of danger, for infected water may be used in the cleansing of cooking utensils, for personal cleanliness, etc. The difficulties in the control of the food supply are even greater, for the sources from which it is obtained are more numerous and, any one of which, may, possibly, cause contamination. Unquestionably milk is the most important food that may be infected, either accidentally, as in washing the cans and bottles in infected water, or possibly by the addition of water to the milk. Epidemics have been traced to chronic carriers among the dairymen. All of this, however, must be controlled by the local health authorities. All suspected cases should, immediately, be reported to the Board of Health and rigid enforcement of the laws governing sanitation should be insisted upon by the proper authorities. Koch has demonstrated to us what can be accomplished by a prompt diagnosis, isolation of patient and thorough disinfection, for by these means, he stamped out an epidemic of seventy-two cases in three months.

My second division, the prevention of the distribution of infectious material, deals with special measures employed in connection with the patient, and, only through a thorough knowledge of prophylaxis, can we, alone, hope to eradicate this

disease. Some of the most important points under consideration, are the prompt disinfection of the sputum, urine and stools, as well as the thorough disinfection of all objects coming in contact with them or the patient. There are numerous disinfecting solutions advised, by the best authorities, but I shall only go into detail concerning the use of two: i. e., milk of lime and carbolic acid. For practical purposes, I would advise the use of the same disinfecting solution for all excreta. There are two things of the utmost importance, namely, that a sufficient quantity of the solution be used and allowed to act for the proper length of time.

Milk of lime has been in use as a disinfectant for many years, but the commercial product is unsatisfactory, for to be of real value it must be freshly burnt and be mixed with water in the proportion of 100 parts lime to 60 water, and allowed to act slowly; thus producing the dry hydrate of lime. To prepare the milk of lime, use one part of this, by weight, to eight parts, by weight, of water. This should be prepared daily, and should be used in the proportion of three parts of milk of lime to one of the excreta.

In using carbolic acid, the proportion should be two parts of a 5 per cent Sol., to one of excreta. When the excreta is added to these solutions all lumps should be well broken up and the whole mixed thoroughly, and the resultant mixture be allowed to stand for at least three hours after the last addition of excreta.

The urinal and bed-pan should be kept in a 5 per cent. carbolic solution except when in use. All bed linen should be soaked in 5 per cent. carbolic solution for three hours and then boiled. All dishes must be boiled after using. The hands of the attendants should be washed well in warm water and thoroughly disinfected with carbolic solution after coming in contact with patient or excreta. Screen windows and doors and eliminate flies, if possible. The patient should be isolated.

We will next consider the third division of the artificial immunization of those exposed to the contagion. Pfeiffer was the first to accomplish any results in the

field of typhoid vaccination. He and Kolle found in the serum of convalescent patients and in the serum of animals, which had been inoculated with typhoid bacilli, certain specific bactericidal substances. However, the practical results obtained by this work were chiefly due to Wright, and he employed the following technic: The bacilli were grown in sterile broth cultures for twenty-four hours, and were then killed by heating to sixty degrees C. The efficiency of anti-typhoid vaccine as a prophylactic has been fully established, but as a curative agent, it is still in a more or less of an experimental state.

It is my aim to, very briefly, give the rational justification of vaccine therapy in this disease. Every recovery from an infectious disease depends upon the destruction of the causative agent or to the neutralization of its toxin. For one to be infected with typhoid fever it is essential that there be present, in their bodies, receptors with which the specific toxin can combine. As is well known these receptors are always present except in certain cases of natural immunity. When a virulent strain of typhoid bacilli are introduced into the human body, their toxin combine with the cell receptors and one of two things result: either the cells are destroyed by the toxins, or the toxins injure the cells and this injury stimulates the cells to the production of vast numbers of free receptors with which the toxin molecule can combine, thus protecting the fixed tissue cells. By the use of typhoid vaccine, we hope to aid nature to more rapidly increase these free receptors. More evidence was added to the already overwhelming testimony in favor of the protective value of anti-typhoid vaccination, by the last report of the Surgeon General of the Army, in the June number of the Journal of the American Medical Association. "The figures given for the fiscal year ending June 30, 1909, showed an incidence of typhoid fever sixteen times greater among the unvaccinated than among the vaccinated troops. Up to October 1, 1910, only five cases had developed among the immunized as against 418 among the non-immunized.

Moreover, of these five cases, four were so mild as to leave doubt as to the diagnosis, and there were no bad effects of any kind as a result of the vaccination." Personally, I am a firm believer in the use of vaccine, as a curative agent, as well as a preventative on these grounds: it decreases the likelihood of a re-infection and sometimes shortens and lessens the severity of the attack. Fletcher reports a series of fourteen cases treated by the vaccine method. None of whom were attended with bad results. The general conditions of all were improved and with three of them the results were little short of marvelous. The treatment is probably best divided into three doses, at intervals of eight or ten days, though some authorities recommend that it be given every third or four day. First dose should be five hundred million bacteria and the other two, a billion each. Further details of this subject are useless, as all phases of the question have been fully discussed in other papers.

McCrae says: "The most important points in treatment are simplicity in the method, care in the nursing, constant watching and common sense throughout," and certainly in no disease are nurse's services of greater value than in the treatment of typhoid fever. Rest and quiet are essential. The patient should have daily baths with warm water and soap, followed with an alcohol rub, give especial attention to the prevention of bed sores, and should there be any likelihood of same, frequent massage and alcohol rubbing should be employed. The teeth, tongue and mouth should be thoroughly cleansed before and after feeding. The following is generally a satisfactory formula to use for this purpose: equal parts of Dobell's, Peroxide and water.

The question of feeding is of vital importance. The diet should be nutritious and easily assimilable, and during the course of fever, the patient should be kept on liquid diet. The main reliance being placed on milk, which should be given in four ounce quantities, diluted with two ounces of lime water, every four hours, alternating with egg albumin. If there is marked distension of abdomen or

curds in stool, the milk should be discontinued. I have used all the following with good results:—meal grewels, whey, buttermilk, malted milk, chicken broth, and, last, but by no means least in my personal experience, eggs and whiskey prepared as follows: separate yolk and white, beating separately. Add sugar to yoke, then slowly beat in whiskey in sufficient quantity to cook yoke, then add beaten white. Patient should be awakened at least once during the night for nourishment. In my opinion, the forced feeding of the Germans, has not given very satisfactory results in this country, although, Shattuck of Boston, uses a most liberal dietary with very good results. The giving of water is almost as important as feeding. This should be given to patients at regular intervals, the minimum amount being three liters daily, and as much more as possible. It increases digestion and absorption of food, excretions are stimulated, and the toxins are more readily eliminated by the increased amount of urine and sweat. When given cold it also acts as an antipyretic.

Notwithstanding the fact that eminent authorities advise differently, I strongly believe in rectal irrigation. It has been my observation that they relieve tympany and add greatly to the comfort of the patient. I have seen the facial expression and the mental condition improve as much after the use of an enema, as is seen after tubing. I have also, been able to reduce an excessively high temperature with an ice enema, when all other methods of hydrotherapy failed. Of all the advances that have been made in the science of medicine in the last century, none have produced more striking results than the treatment of typhoid fever by hydrotherapy. There are various ways of applying hydrotherapy, the chief of which are: tub baths, sponges and a combination of packs, sponges and sprinkling.

Tub Baths.—With this form of treatment, the mortality is lower than with any other. It should be used at the onset and carried out, systematically, through out, as is insisted on by Brand. Baths are given every three hours, when the temperature is $102\frac{1}{2}$ F. or over. The first

one should last about ten minutes, with the water at a temperature of 85 degrees F. The length of baths should be increased to fifteen or twenty minutes and the temperature of the water is lowered five degrees with each succeeding bath, until the most desirable point is obtained. However, it should not be below 70 degrees F. The ears should be plugged with cotton, and gentle friction should be employed with the palm of the hand, while the patient is in the tub. A compress wrung out of cold water is put on the head and changed frequently. There may be cyanosis and shivering, but these need cause no alarm, but marked cyanosis, collapse, vomiting, hemorrhage or complaint of abdominal pain are indications for immediate removal.

Sponges.—In giving sponges, place patient on rubber sheet and apply cold compresses to the head, neck, abdomen, axillae and wrists. These should be changed every four or five minutes. Each extremity and the back should be sponged for five minutes, the nurse, making long strokes with a wet sponge, over the large vessels, along the inner side of the arm and over the front of the thighs. These may be given with water at any temperature, but, for them to be very effectual, use large sponges and considerable amounts of ice water. You sponge at a temperature of $102\frac{1}{2}$ F. every three hours, the duration of the sponge being from twenty-five to thirty minutes.

One of the most useful ways of applying hydrotherapy in private practice, where a tub is not obtainable, is a combination of a pack, sponge and sprinkling. The procedure is carried out as follows: The patient is placed between sheets wrung out of ice water and these are kept wet by frequent sprinkling. Ice compresses and sponging use as in sponge baths. Hot water bag to feet. The advantage resulting from this line of treatment are:—

1st.—Its effect upon the nervous system. "With the baths, the delirium lessens, the tremor diminishes, and the mental condition becomes much clearer." The best results are seen in the more virulent cases,

attended with active delirium and sub-sultus tendinum.

2d.—The excretions of toxins is increased. This is largely brought about by the increased urinary output.

3d.—Reduction of temperature. This is by no means the most important result obtained, for in many cases, very little lowering of temperature is noted, and at the height of the attack it may be unchanged after a bath, while toward the latter part of the disease there may be a fall of three or four degrees.

4th.—The circulatory system is improved. The heart becomes slower, the pulse becoming smaller and harder.

5th.—The likelihood of bed-sores is diminished and the skin is kept clean and frequently stimulated.

6th.—The mortality is lessened, and this in itself should be ample reason for its employment. Under the expectant treatment the mortality is about 15 per cent., while under the bath treatment, it varies from 7 to 8 per cent.

The contradictions to the Brand method are:—Hemorrhage, phlebitis, peritonitis, great prostration and cholecystitis.

Concerning the treatment by drugs in typhoid fever, I have very little to say. Calomel, in broken doses, at the beginning of the attack is, probably, beneficial. Coal tar derivatives are contradicted and very little dependence can be placed in intestinal antiseptics, some of them acting as heart depressants. While we have no specific with which to treat this disease, yet, I believe by carefully watching the patient, correctly interpreting the symptoms and skillfully treating same, we frequently save life.

Gastro-intestinal Symptoms.

Under this are included diarrhoea, constipation and meteorism. With diarrhoea the stools must be frequently inspected, and if curds appear the milk should be further diluted or discontinued, and replaced by whey. An ice bag applied to the abdomen is sometimes of advantage, by lessening peristalsis. If necessary, bismuth may be given every three hours in large quantities. I strenuously object to opiates and have gotten good results

by giving castor oil and using rectal irrigations.

Constipation—This is best relieved by low oil enema every other day.

Meteorism is best controlled by careful attention to diet, however, if this does not correct the trouble, all food should be discontinued for at least 24 hours, giving large amount of water. Turpentine is the most useful drug, and it should be given by mouth, rectum or in the form of stupes.

Circulatory System.—The pulse and heart must be carefully watched, and when the first sound of the heart becomes feeble and the pulse becomes rapid, compressible and irregular, stimulants are required, the best of which is strychnine and alcohol.

I have already consumed more than my allotted time with this paper, so it will be impossible for me to touch on complications.

In conclusion, "yet is not the sick to be left as desperate because the disease is not hasty, and kills not suddenly, and out of hand, but is drawn out at length, and grants times and occasions to nature of recollection herself, and to the Physician of giving Remedies."

THE COTTON MILL AND TUBERCULOSIS.*

J. H. Hammond, M. D., LaFayette.

In calling attention to the cotton mill, including the houses of operatives as they exist in at least some portions of our country, as affording conditions favorable to the propagation of tuberculosis, and therefore as presenting a field especially suitable for combatting the disease, it is taken for granted that more good can be done by preventing than can be accomplished by curing cases of the affection. Also the germ being short lived out of the body, and—for all practical purposes—escaping from the sick only through the sputa, it is clear that the most rational way to fight the disease is to control the expectoration of the tuberculous. That this alone thoroughly done, would imme-

*Read at meeting of Seventh District Medical Society, Rome, Oct., 1912.

diately almost put an end to the disease is obvious enough to any one reasonably conversant with the nature of the malady. Until this truth, however, can be more successfully taught to the people, and the gravity of its neglect more adequately impressed upon them, or until we have laws that will lead to the pointing out and control of the infected, it will be necessary, if we make much progress in overcoming the disease, to resort to other procedures. One of the most important of these, where the organization of business is such as to render it possible, is entirely to exclude tuberculous individuals from occupations where the workers are much crowded.

Of all occupation in this country, probably none presents conditions more worthy to be considered in this connection than does cotton milling, and therefore the very brief mention of some of its peculiar features may not be without a degree of interest.

The buildings in which cotton manufacturing is carried on are very broad, as a rule, not less than seventy-five feet, often much broader. This means the exclusion of sunlight, one of the most potent agents in the destruction of the tubercle bacillus. In order to make the fibre work well, a high degree of heat is constantly maintained, and but little ventilation allowed. Amid these conditions, which powerfully depress and render susceptible the operative, and at the same time tend to keep alive the germ after it has been expectorated, hundreds of men, women and children, many in most instances infected, are closely associated for ten or twelve hours a day, six days in the week, both the sick and the well generally ignorant of the danger they cause or suffer.

One circumstance is favorable, the fly, the principal agent concerned in the transference of the germ, is not very numerous in cotton mills. For this reason, it is possible that infection does not as often occur within the walls of a mill as would otherwise be the case.

The undermining of the general health, and the consequent crippling of the disease resisting power of the body induced by the unwholesome conditions enumerated probably outweighs in importance the

danger of infection taking place within the factory especially when this increased vulnerability is associated with the peculiar home life of those operatives who dwell in mill communities.

Conditions favorable to infection in the home life of people of this class, some of which are in a measure peculiar to them, may be very briefly stated: The proximity of many houses, they usually being situated only a few feet apart perfect social-equality, causing so much intermixing as to convert them, in a sense, into one large family; abundance of the house fly; the uninstructed state of the great majority, and the certainty that among so many a sufficient number will so disregard all measures of prophylaxis, even when carefully explained, as to endanger the whole community. Another characteristic of these people, which every physician who practices among them has probably observed, is their aversion to proper ventilation, the result, it may be, of their habitual confinement during the day within overwarm and tightly closed buildings.

Only recently a woman in the last stage of consumption in a cotton mill town was observed to use an open cup to receive her sputa. This was deposited on the sill of an open window where it was literally covered and filled with flies, many coming from nearby houses, notwithstanding both she and her neighbors had been carefully told of the danger of such practice. A young man whose sputum contained bacilli, after receiving treatment for a few weeks in a sanitarium, returned home and resumed his place in the mill, without undergoing any examination to determine his condition, and without any question whatever being raised as to the propriety of his close association with other operatives.

These are illustrations of what is constantly taking place in these institutions.

If this paper exhibits no other practical thought, it at least suggests the need of legislation that would require the reporting of cases of tuberculosis. In an institution of this kind under the control of one head, by removing a tuberculous individual, or an infected family, or by the control of sanitary conditions, a single

order would be capable of removing danger from hundreds or thousands. But such work is not possible unless the cases of the disease are known, that is unless physicians are required to report them.

MEMBERSHIP IN THE AMERICAN MEDICAL ASSOCIATION.

The Proposed Change in Name.

George H. Simmons, M.D., L.L.D., Chicago.

EXPLANATORY NOTE.—This abstract of an address before the Conference of State Secretaries is republished from the American Medical Association Bulletin of Nov. 15, 1912, on the request of the Judicial Council. The house of delegates referred the report of the committee to formulate amendments to the Constitution and By-Laws to extend membership, presented at the 1912 session (Journal. June 15, 1912, p. 1899) to the Judicial Council with power to confer with Constituent Associations. The Council, after careful consideration, endorses the proposed change and takes this means of bringing the subject to the Constituent Associations as well as directing to it the attention of the members.

I have been asked to discuss the present conditions of membership in the American Medical Association and the proposed change, which has been under discussion recently. While this is not directly related to the object of this conference, the discussion of uniform regulation of state membership, it is so closely connected with it that I cannot refuse to take advantage of the opportunity of discussing the question before such a large representation of state secretaries.

To get a clear understanding of what the present term "members" of the American Medical Association means, it is necessary to go back a little in the history of the Association.

The American Medical Association always has been a delegated body; only "delegates" ever had a right to take part in its proceedings.

"Permanent members" was a term originally applied to those delegates who connected themselves permanently with the Association after they had served as delegates. "Permanent members," however, had no rights except those of attending the meetings and taking part in the scientific work. In 1883, The Journal was started and the following year, for the purpose of

increasing the circulation of The Journal, there was created another class "Members by Application." A member of any so-called affiliated society could become a "member by application" simply by making application for membership and paying the annual dues. The difference between "members by application" and "permanent members" was that the latter had been delegates, whereas the former became members simply by making application. Neither "permanent members" nor "members by application" had vote or voice in business meetings.

Membership in the A. M. A. Today on the Same Basis as the Former "Members by Application."

Briefly, we have the following situation:

1. The voting membership of the organization is the combined membership of all the 2,000 (more or less) component county societies, amounting approximately to 70,000 members. These elect the delegates to the House of Delegates of the state associations; they in turn elect the delegates who form the House of Delegates of the American Medical Association. Before 1901 the delegates to the American Medical Association were elected, or appointed, by the "affiliated" societies, which included local, district and state societies. Since 1901, that is, since the reorganization, the delegates to the national body are elected not by local, district and state societies, but by the state societies alone.

2. The so-called "members of the American Medical Association" are the direct successors of the old "members by application." By their payment of dues and their subscriptions to The Journal, they were and are today the supporting or contributing group of the members of the organization.

3. The House of Delegates is composed of approximately 150 members, who are elected by the various state Houses of Delegates, which are in turn composed of delegates elected by the members of the component county societies. The House of Delegates of the American Medical Association, therefore, is created by, and represents the combined membership of all

the county societies of all the states; it is not elected by, nor does it represent, the present "members of the American Medical Association" as such; it never has.

The result is that we have two classes which could be called members. First, the actual, logical memberships of 70,000 usually designated as "the membership of the organization." Second, the 36,822 contributing or supporting members, who are designated as "members," although these "members of the American Medical Association" have no more privileges than have all members of the organization, except the right to take part in section work. This present situation I have had shown on the accompanying chart (Chart 1). The mem-

bership of the members of the organization of the whole country.

Now the situation itself is perfectly logical and is in every way to be commended. The trouble is that we have not named our groups accurately. Those whom we now call "members of the American Medical Association" are really those members of the organization who, in addition to supporting their county and state associations, also contribute to the support of the American Medical Association, while for the actual membership of 70,000 members we have no distinctive name.

The change that has been proposed is not a change in condition at all. It is simply a change in name. It is proposed

The Present Situation:



Chart 1

bership of the American Medical Association, at present 36,822, is an inner circle of the membership of county societies, while the House of Delegates is a still smaller circle composed of those who have been

to designate the 70,000 members included in the large outer circle (Chart 2) as "members of the American Medical Association," which they really are and always have been, while those included in

the inner circle (that is, those members in good standing of their county and state societies, who also pay \$5 a year to support the work of the American Medical Association) are to be called "fellows of the American Medical Association" instead of

component county societies of the whole country.

This plan has several advantages. In the first place it will give us a name for the entire membership of the organization, which we have never had before. Before



Chart 2

"members." This will make no change in the membership standing or relations of any man. If this suggestion is adopted, all members in good standing in their state organizations will be designated as "members of the American Medical Association," while those members who contribute \$5 a year to support the work of the Association will be designated as "fellows of the American Medical Association." In other words, those who are now known as "members" of the American Medical Association will be known as "fellows" of the American Medical Association, while the term "members" will be applied to the entire, combined membership of the

1901 they were referred to as members of "affiliated" societies, and since then they have been called, for lack of a distinctive name, "members of the organization." Another advantage will be that it will make clear that the voting power lies with the 70,000 members and not with the 36,822 "fellows." When this plan was first proposed, some got the impression that the intention was to compel the 70,000 members of the county societies to become "supporting members" of the American Medical Association, as the term is now understood. This, of course, would be a ridiculous proposition. The proposed change contemplates leaving membership

conditions exactly as they are; it contemplates changing the name, and not the relation.

One great advantage prior to the reorganization of the American Medical Association in 1901 was the fact that we had no name by which to designate the delegates. As soon as the name "House of Delegates" was adopted, then the function of the delegates became clear at once. The Association also has labored under the disadvantage, ever since its reorganization, that there has been no name by which to designate the actual voting membership, because the term "members" had been applied to the supporting body. The proposed change simply recognizes this fact, designating as "members" those who really are members, and designating the supporting members as "fellows."

I have already given some reasons for making the change, but there is another and more important; in fact, it is the paramount reason. Up to the present time, the members of the organization have not realized that they are, in reality, members of the American Medical Association. They regard the American Medical Association as something entirely apart from them, something in which they have no interest. These members of the organization are through their elected representatives responsible for what the American Medical Association is doing, or what it ought to do and is not doing, but they do not realize this, hence they are not interested. They do not appreciate that the House of Delegates of the American Medical Association, which they elect, is the body that is doing the work through the officers, trustees, councils, etc., which they, through their representatives in the House of Delegates of the American Medical Association, select. While only a change in name, I think the subject is of the utmost importance. I hope that all of you will look into it carefully, so as to understand exactly what is intended, and then will explain it to your members at the first opportunity.

Make an effort to attend the Savannah meeting April 16-17-18.

A TRAVELING HOSPITAL FOR RURAL NEEDS.

A pressing need of our rural districts is for the same kind of hospital treatment which is open to even the poorest inhabitants of our city slums. Dr. C. W. Stiles has made some observations on this subject as a part of his work with the Hookworm Commission. The average mother with whom he comes in contact in field work is attended in her confinements, rarely by a physician or a trained nurse, usually by some of the neighbors or a dirty and ignorant midwife, with the result that injuries frequently occur which are never properly treated. He also finds large numbers of children who are handicapped in their physical and mental development by large tonsils and adenoids, and by defective eyes and teeth. He says, moreover, that the average country woman (white or black) with whom he comes in contact has exceedingly rudimentary ideas on cooking, housekeeping and care of children and the sick, and to meet the needs of this side of the problem the district nurse would be invaluable. The remedy which he proposes for these evils is a traveling hospital, equipped for the minor surgical work on children suggested above and for the repair of obstetric injuries or gynecologic ailments. He believes that it would be a comparatively simple matter to fit out a special hospital train of from three to six cars and take it to districts without hospitals. The difficulties to be overcome in establishing these trains are not insurmountable, and the expense need not be greater than that connected with any other hospital. The traveling hospital could also be utilized to bring about such results as much-needed postgraduate medical instruction to local physicians; ideas on cooking, housekeeping, infant-feeding, etc., to mothers; ideas on sanitation to the fathers, and special instruction along health lines to the schools. Stiles believes that this work is more important than the teaching of the farmers by special school trains how to increase their crops or how to take care of their live stock.

THE JOURNAL OF THE MEDICAL ASSOCIATION OF GEORGIA.

300-302-304 Harrison Bldg.

SUBSCRIPTION

PRICE.....ONE DOLLAR PER YEAR

SINGLE COPIES of this calendar year, 15 cents; of the previous calendar year, also 15 cents; two years old, 20 cents; three years old, 25 cents; in other words, 5 cents additional is charged for each year preceding the last calendar year.

REMITTANCES should be made by check, draft, registered letter, money or express order. Currency should not be sent unless the letter is registered. Stamps in amounts under one dollar are acceptable.

CHANGE OF ADDRESS notice should give both the old and the new address, and state whether the change is permanent or temporary. The change notice must reach us ten days in advance of the date of the issue which is to be forwarded to the new address.

WARNING: Pay no money to an agent unless he presents a letter showing authority for making collection.

ADVERTISEMENTS

Advertising forms go to press eight days in advance of the date of issue. In sending in copy time must be allowed for setting up advertisements and for sending proofs. No proprietary medicines can be advertised until approved by the Council. Advertising rates will be sent on request.

CONTRIBUTIONS

EXCLUSIVE PUBLICATION: Articles are accepted for publication on condition that they are contributed solely to this journal.

CONTRIBUTIONS TYPEWRITTEN. Authors should have their contributions typewritten—double-space and with ample margin—before submitting them. The expense is small to the author—the satisfaction is great to the editor and printer. We cannot promise to return unused manuscript, but try to do so in every instance. Manuscript should not be rolled or folded.

ILLUSTRATIONS: Half-tones and zinc etchings will be furnished by THE JOURNAL when satisfactory photographs or drawings are supplied by the author. Each illustration, table, etc., should bear the author's name on the back. Photographs should be clear and distinct; drawings should be made in black ink on white paper. While we cannot guarantee to return used photographs and drawings, we use our best endeavors to do so after the article is published, if the word "return" is written on the back of each.

ANONYMOUS CONTRIBUTIONS, whether for publication, for information, or in the way of criticism are consigned to the wastebasket unread.

NEWS: Our readers are requested to send us items of news of a medical nature, also marked copies of local newspapers containing matters of interest to physicians. We shall be glad to know the name of the sender in every instance.

A WORD TO COUNTY SECRETARIES.

Try to retain on your roll this year the name of every member of last year. Try to get every new member possible, but "old friends are best," and the officers of the association had rather see the name of every old member than to see it replaced by two new ones. If the county officers will pledge themselves to keep all old members on the rolls, the state officers will pledge themselves to secure enough new names to give us three delegates to the national organization.

Let's all pull together.

SEND IN TITLES.

We publish in this issue a list of the papers that have, to date, been promised us for the Savannah meeting. Look over this list and if your name does not appear, be sure that it appears in the final list. No papers will be accepted after April first.

PLAN OF ORGANIZATION.

The attention of members is called to an article in this issue outlining the plan, whereby every member of a county society, is without any extra cost made a member of the American Medical Association.

This plan will, in all probability, be adopted at the Minneapolis meeting in June, and county society officers should take advantage of this opportunity to secure new members, advising all eligible physicians in their counties of the advantage of membership, under this proposed plan.

TITLES OF PAPERS, SAVANNAH MEETING.

1. A report of Caesarean Sections done during the past year—E. C. Davis, Atlanta.
2. Appendicitis without Appendiceal Symptoms—R. M. Harbin, Rome.
3. Infant Feeding Simplified—W. A. Mulherin, Augusta.
4. A better way of putting a diaper on a baby—S. A. Visanska, Atlanta.
5. Imperfect Development a Factor in Genesis of Diseases of Women—Baxter S. Moore, Atlanta.
6. Some facts concerning the etiology of insanity, based on a study of the admissions to the Georgia State Sanitarium during the year 1912—R. C. Swint, Milledgeville.
7. Practical Anesthesia—Chas. Usher, Savannah.
8. Most Prevalent Intestinal Parasites Found in Georgia—A. G. Fort, Atlanta.
9. A plea for more interest in Pediatrics—C. A. Rhodes, Atlanta.
10. Health Conditions as they exist in most South Georgia Municipalities.—Arthur D. Little, Thomasville.

11. Intubation in Diphtheria—W. N. Adkins, Atlanta.

12. On Cardio-Vascular Renal Disease, With cases illustrating chief Factors—S. R. Roberts, Atlanta.

13. A Plea for the Medical Inspection of our Country Schools—L. C. Allen, Hoschton.

14. Report of a few cases of Transfusion—C. C. Harrold, Macon.

15. Post Operative Hemorrhage and Surgical Shock—W. W. Battey, Jr., Augusta.

16. The Criminal Insane—E. M. Green, Milledgeville.

17. The Care of the New Born—M. A. Clark, Macon.

18. Sugery among Insane Females. Report of Cases—Y. A. Little, Milledgeville.

19. Syphilis from the Standpoint of the Physician—Cosby Swanson, Atlanta.

20. Chronic Suppuration of the Middle Ear; the Radical Operation for its Cure; and a Report of Cases—F. M. Cunningham, Macon.

21. What the General Practitioner should know about Ophthalmology—Cecil Stockard, Atlanta.

22. The Pros and Cons of Duodenal Alimentation—Geo. M. Niles, Atlanta.

23. A Discussion of Medical and Pharmaceutical Practices and the Problems involved in Georgia—Robt. C. Wilson, PH. G., Athens; Prof. of Pharmacy, University of Georgia.

24. Prostatitis—Montague Boyd, Atlanta.

25. The Physician, his duties and obligations—R. B. Barron, Gray.

26. Contractures of the Psoas Parvus Muscle simulating Appendicitis—Geo. R. White, Savannah.

27. Acute Osteo-myelitis: The Importance of Early Diagnosis and Treatment—F. K. Boland, Atlanta.

28. Treatment of Pneumonia—J. W. Palmer, Ailey.

29. The Saemisch Section—A. W. Stirling, Atlanta.

30. Some Gynecological Disorders Dependent upon General, rather than Local Causes—J. R. B. Branch, Macon.

31. Stock Vaccines versus Autogenous Vaccines—C. W. Gould, Atlanta.

32. Is Floating Kidney a Surgical Disease?—Wm. Perrin Nicholson, Atlanta.

33. A preliminary Report on the use of Sodium Cacodylate in the Treatment of Malaria—E. E. Murphey, Augusta.

34. Some of the newer and more rational methods of treating Aural Diseases—Dunbar Roy, Atlanta.

35. (Title to be furnished)—E. Bates Block, Atlanta.

36. Tuberculosis of the Spine—C. R. Andrews, Atlanta.

37. Immediate Repair of Lacerations of the Perineum with report of cases—J. L. Campbell, Atlanta.

38. Chronic Interstitial Nephritis—W. B. Hardman, Commerce.

39. The Use of Bacterial Vaccines in the Treatment of Acute and Chronic Infections with report of Results—Lewis M. Gaines, Atlanta.

40. Chronic Nephritis; Dietetics and Treatment—R. F. Wheat, Amsterdam.

41. Optic Atrophy, caused by Uterine Hemorrhage—F. P. Calhoun, Atlanta.

42. The lawyer and His Pauper Client; The Doctor and his Charity Patient—J. G. Dean, Dawson.

43. Eclampsia—H. W. Birdsong, Ashland.

44. Pituitrin—Marion T. Benson, Atlanta.

45. Diagnosis of Appendicitis and when to operate—L. C. Fisher, Atlanta.

46. The Interpretation of the Wasserman Reaction—E. G. Ballenger, Atlanta.

47. (Title to be supplied)—Everard A. Wilcox, Augusta.

NEW MEMBERS.

J. A. Price.....	Milledgeville
O. C. Holly.....	R. F. D., Summit
Walpool Brewer.....	Atlanta
R. M. Nelson.....	Atlanta
Wm. H. Henderson.....	Rossville
Gordon E. Martin.....	Menlo
Willis J. Bryant.....	Summerville
W. M. Dunn.....	Atlanta
W. F. Wells.....	Hapeville
B. S. Bomar.....	Atlanta
O. F. Elder.....	Atlanta
W. N. Adkins.....	Atlanta
L. L. Andrews.....	Atlanta

J. T. Floyd.....	Atlanta
C. B. Greer.....	Atlanta
M. W. McLarty.....	Atlanta
A. B. Jones.....	Atlanta
E. W. Dean.....	Hiram
T. J. Anderson.....	Hiram
E. H. Robertson.....	Dallas
W. O. Hitchcock.....	Dallas
W. H. Beall.....	Dallas
J. I. Matthews.....	Dallas
J. C. Holliday.....	Athens
J. P. Waldrep.....	Athens
B. B. Chandler.....	R. F. D. Hull
Giles Hathecock.....	Belton
Frances Sweet.....	Decatur
J. E. Pounds.....	Stone Mountain
C. L. Allgood.....	Scottdale
J. B. Tanner.....	Benevolence
T. H. Holton.....	Atlanta
B. H. Clifton.....	Atlanta
E. P. Merritt.....	Atlanta
E. L. Norton.....	Atlanta
W. L. Ballenger.....	Atlanta
E. V. Bailey.....	Atlanta
M. K. Jenkins.....	Atlanta
W. H. Cross.....	Atlanta
M. C. Pruitt.....	Atlanta
C. W. Strauss.....	Copper Hill, Tenn.
C. B. Walling.....	Collins
J. M. Hughes.....	Glennville
S. F. Smith.....	Glennville
J. W. Daniel.....	Claxton
J. L. Kennedy.....	Manassas
J. J. Kennedy.....	Collins
G. W. Tootle.....	Glennville
L. A. DeLoach.....	Glennville
B. E. Miller.....	Claxton
J. H. Hendry, Jr.,.....	Shellman
J. J. Foster.....	College Park
L. W. Wiggins.....	Atlanta
Jas. L. Hull.....	Atlanta
W. A. Gardner.....	Atlanta
H. M. S. Adams.....	Atlanta
C. H. Paine.....	Atlanta
M. T. Davis.....	Atlanta
O. L. Miller.....	Atlanta
Thos. H. Smith.....	Atlanta
Chas. O. Smith.....	Atlanta
W. A. Upchurch.....	Atlanta
C. E. Suggs.....	East Point
F. A. Neergaard.....	Augusta
T. G. Kershaw.....	North Augusta

EDUCATIONAL BULLETINS OF STATE BOARDS OF HEALTH

Bulletins issued by many of the state boards of health are being used more and more for the education and enlightenment of the public rather than for the recording of long tables of statistics and formal reports. In no section is the increased activity of state health authorities more marked than in the South. The bulletins of the state board of health of three Southern states which recently came in the same mail, are interesting evidence on this point. The November Bulletin of the Mississippi State Board of Health contains a copy of the proclamation of Governor Brewer, designating November 20th as a health day, and urging the observance of the program of the state board of health on the part of all citizens. The state board, co-operating with the state department of education and the Mississippi Federation of Women's Clubs, presents a program for use in all of the schools in the state, an outline for a course of study on public health by the women's clubs, and a comprehensive article on medical inspection of schools. The November Bulletin of the Virginia State Board of Health contains an announcement of a lecture bureau established by the board to furnish speakers on public health topics for any community in Virginia which desires to hold a public meeting. The announcement opens with the statement, "Settled in its conviction that the education of the people is the surest method of bettering the public health, the board, since its reorganization, has endeavored to place before the citizens of Virginia, in proper form, the tested truths of prevention." In this statement, says The Journal of the American Medical Association, lies the summary of the entire public health movement. The December Bulletin of the North Carolina State Board of Health is devoted to the discussion of the liquor problem and public health, and the relation of alcohol to public health problems. An article on "The Attitude of the Medical Profession to the Use of Alcohol"; a friendly talk to boys on the subject, "Does it Pay to Drink Whisky?"

and an article on "The Relation Between Liquor and the Death-Rate" form the bulk of the pamphlet. These three pamphlets are simply selected at random from the constant stream of excellent material which is being placed in the hands of citizens by many of our state boards of health. This work cannot fail to enlighten and strongly influence public sentiment, which must ultimately crystallize in better legislation.

AGRICULTURE AND PUBLIC HEALTH

The educational value of the bulletins issued by the Department of Agriculture has been generally recognized. A list recently issued by the Department of Agriculture contains the names of the new publications issued during a single month. The list shows the manifold activities of the department and its intimate contact with the daily lives and needs of our farming population. Among the pamphlets listed are advance reports of field operations of the Bureau of Soils. Separate pamphlets contain reports of soil surveys of Jackson County, Ala., Windham County, Conn., Lowndes County, Miss., and Laclede County, Mo. Among the new bulletins are pamphlets on "The Manufacture of Butter for Storage," "Feeding Beef Cattle in Alabama," "The Cowpea Weevil," "Forest Fires, Their Causes, Extent and Effects," "the Weed Factor in the Cultivation of Corn," etc. Circulars on "Chicken Fat," "Hints to Poultry Raisers," "Directions for Constructing Vats and Dipping Cattle to Destroy Ticks," "Insects Injurious to Mushrooms," "Hog Raising in the South," "Cockroaches and Clothes-Moths," all containing the observations and conclusions of experts on these various subjects, are printed by the department and can be had for a few cents by any one interested. The variety of topics covered by the various bureaus and divisions of this department is almost bewildering. No one complains that the government is exceeding its functions or that the preparation and distribution of these pamphlets in any way interfere with religious or civic liberty. Yet the scientific facts on which these pamphlets are based are exactly the

same as those which form the foundation of our present knowledge of disease. Chemistry is responsible for our knowledge of the human body and the way in which it works. The same chemistry is the basis of soil analysis and modern methods of fertilizing. Bacteriology, which gives the farmer information regarding cheese, fermentation and diseases of animal and plant life, is the source of our knowledge regarding preventable diseases of man. If the federal government can analyze the soil of Jackson County, Ala., and issue a report on the conditions which it finds, why can it not inspect the physical condition of the citizens of Jackson County and report on the avoidable diseases which prevail there and the best means of preventing them, asks The Journal of the American Medical Association. If the government can publish a report on the bacteriology of cheddar cheese, why cannot it inform the people regarding the bacteriology of typhoid fever or cerebrospinal meningitis? If the preparation of a bulletin on forest fires is a proper government function, why is not a bulletin on epidemics of diphtheria, their causes, extent and prevention, also a legitimate activity of the government? Ignorant or prejudiced obstructionists cannot obscure the issue by talking about "schools of medicine" and "personal liberty." There are no "schools" in the domain of science. Education and increased knowledge have always made men free and have never interfered with their liberty.

A REWARD FOR COLONEL GORGAS

Bills have recently been introduced into the Senate and House of Representatives looking to the reward of Colonel Goethals by authorizing his appointment as an additional major-general, and, in the discretion of the President, providing for his assignment as chief of engineers. This proposition suggests several comments, the first of which is that it makes no provision for the reward of Colonel Gorgas. It is also defective in that its provisions depend in part on a contingency which Congress cannot control, because the selec-

tion of the chief of engineers is a constitutional function of the executive.

It is now recognized by all well-informed persons that the sanitation of the Isthmus was as essential to the success of the canal construction as was the surmounting of the engineering difficulties, and, of the two sets of problems involved, the sanitary problems were newer and along less well-beaten paths than were the engineering ones. While Colonel Goethals is the administrative head of the commission, he and Colonel Gorgas have at present the same military rank. The applications of engineering science to canal construction have no intrinsic precedence over those of medical science to the new and complex questions of tropical sanitation; it would seem, therefore, that there should be little or no difference in the value of the rewards given the two, and it is appropriate that they be provided for in the same act.

There are some other considerations which might well be kept in view when such legislation is under consideration. This work is a great national enterprise which is apart from the usual activities of Army officers, and in no way connected with Army administration. The reward should be in keeping with the national dignity and the magnitude of the enterprise, and should be outside of the routine of Army promotions, so that other officers of the engineering and medical corps who have borne the burden of the routine but important work, without the incentives of increased pay and public applause, may not be called on to give their own ewe lamb of promotion as a contribution to the nation's gift.

Again, the officers of the military service are usually compelled by the requirements of their life to live up to their incomes, and when they die their families are left without decent provision. A major-general's widow receives the munificent pension of \$30 a month. It would, therefore, be fitting that there should be added to the military promotion in rank a donation of money, as is the custom of the British government, so that the generosity of the nation could be applied by the recipient

to the needs of those who are dearest to him.

A major-generalship with a cash donation, says The Journal of the American Medical Association, would be the most appropriate form of reward for each of these distinguished men, and the act should also provide that after their retirement the President should be authorized to place them on active duty with full pay and allowances whenever their advice or assistance is required on engineering and sanitary questions.

DELINQUENTS.

We are convinced that ninety per cent of delinquencies are occasioned by rank carelessness. A few members refuse to pay their dues each year because they have become disgruntled about something connected with the management either of the local society or the State Association; others do not pay because they actually have not the money at the time, but the great majority undoubtedly simply neglect the matter. The first two classes are inevitable and we can only hope that common sense and good times will lessen their number, but by due diligence on our part the latter class could be actually eliminated. When we consider how much trouble our delinquency occasions, it is rather strange that we should permit it to exist. The amount due is small and it would be so easy, even at the time this item is being read, to write a check, payable to the County Secretary, and mail it to him. Annual reports will have to be filed in the office of the State Secretary by April 5th, and those who have not paid by that time will have their delinquencies recorded. Of course, delinquents may qualify as members in good standing at any time during the year, but many of us do not wish to have it show that we have been delinquent.

A PAYING INVESTMENT.

An Advertisement in The Journal of the Medical Association of Georgia will bring results. Rates sent on request.

LIST OF STATE MEDICAL SOCIETIES

This information is correct to date of going to press, so far as we have been able to obtain it from the various secretaries. Officers or others are requested to notify us of any errors or required changes. For further information concerning any society address the secretary.

SOCIETY	PRESIDENT	SECRETARY	NEXT ANNUAL MEETING
Alabama, Medical Assn. of the State of.....	H. T. Inge, Mobile.....	J. N. Baker, 602 So. Perry st., Montgomery.....	Mobile, April 16, 1913.
Arizona Medical Association.....	Francis E. Shine, Bisbee.....	John W. Flinn, Prescott.....	
Arkansas Medical Society.....	Morgan Smith, Little Rock.....	C. P. Meriwether, 309 S. Tr. Bldg., Little Rock.....	
Connecticut State Medical Society.....	John G. Stanton, New London.....	Walter E. Steiner, 4 Trinity st., Hartford.....	
California, Medical Soc. of the State of.....	Thos. W. Huntington, San Francisco.....	Philip M. Jones, Butler Bldg., San Francisco.....	Pueblo, September 24-26, 1912.
Colorado State Medical Society.....	Walter A. Jayne, Denver.....	Melville Jones, Metropolitan Bldg., Denver.....	Wilmington, Oct. 8, 1912.
Delaware State Medical Society.....	Frank L. Springer, Newport.....	G. W. K. Forrest, 901 Jackson st., Wilmington.....	
Florida Medical Association.....	Albert H. Freeman, Starke.....	J. D. Fernandez, Jacksonville.....	Savannah, April 16, 1913.
Georgia, Medical Association of.....	W. W. Fisher, Warrenton.....	Wm. C. Lyle, Augusta.....	
Illinois State Medical Society.....	Irwin J. Shepherd, Honolulu.....	Edmund W. Weis, Ottawa.....	Indianapolis, Sept. 27-28, 1912.
Indiana State Medical Association.....	William F. Howat, Hammond.....	Chas. N. Combs, Terre Haute.....	
Iowa State Medical Society.....	L. W. Littig, Davenport.....	V. L. Treynor, Council Bluffs.....	
Kansas State Medical Association.....	William F. Howard, Pocatello.....	Ed. E. Maxey, Boise.....	Louisville, Oct. 12, 1912.
Kentucky State Medical Association.....	John T. Axtell, Newton.....	Chas. S. Huffman, Columbus.....	Baton Rouge, 1913.
Louisiana State Medical Society.....	J. G. Carpenter, Stanford.....	Arthur T. McCormack, Bowling Green.....	
Michigan State Medical Society.....	B. A. Ledbetter, New Orleans.....	Joseph D. Martin, 141 Elk pl., New Orleans.....	Duluth, August 14-15, 1912.
Minnesota State Medical Association.....	D. Emmet Welsh, Grand Rapids.....	Wilfrid Haughey, 24 W. Main st., Battle Creek.....	Vicksburg, 1913.
Mississippi State Medical Association.....	Haidor Saeve, St. Paul.....	Thos. McDevitt, 210 Lovry Bldg., St. Paul.....	
Missouri State Medical Association.....	S. W. Glass, Dublin.....	E. J. Howard, First Nat. Bank Bldg., Vicksburg.....	
Montana State Medical Association.....	Robert H. Goodier, Scuttsville.....	E. J. Goodwin, 3525 Fine st., St. Louis.....	
Maine Medical Association.....	T. C. Witherspoon, Butte.....	Herbert D. Kistler, Murray Hospital, Butte.....	
Maryland, Medical and Chir. Faculty of.....	Stanley F. Warren, Portland.....	W. Bean Moulton, 622 Congress st., Portland.....	
Massachusetts Medical Society.....	A. C. Harrison, Baltimore.....	John Ruhrah, 1211 Cathedral st., Baltimore.....	
New Hampshire Medical Society.....	Geo. B. Shattuck, Boston.....	Walter L. Burrage, 282 Newbury st., Boston.....	
New York, Med. Soc. of the State of.....	Geo. W. McGregor, Littleton.....	D. E. Sullivan, 7 No. State st., Concord.....	
New Jersey, Medical Society of.....	John F. W. Whitbeck, Rochester.....	W. J. Chaudler, 65 So. Orange ave., So. Orange.....	Rochester, 1913.
Nevada State Medical Association.....	Daniel Strock, Camden.....	Jos. M. Aikin, 465-468 Brandeis Block, Omaha.....	
New Brunswick Medical Society.....	Andrew D. Nesbit, Tekamah.....	J. S. Bentley, St. John, N. B.....	
North Carolina, Med. Soc. of the State of.....	C. T. Purdy, Moncton, N. B.....	David A. Stanton, High Point.....	
New Mexico Medical Society.....	Alfred A. Kent, Lenoir.....	R. E. McBride, Las Cruces.....	
North Dakota State Medical Association.....	Robert L. Bradley, Roswell.....	H. J. Rowe, Casselton.....	
Ohio State Medical Association.....	Clinton E. Spicer, Litchville.....	J. H. J. Upham, 186 E. State st., Columbus.....	
Oklahoma State Medical Association.....	Horse Bonner, Dayton.....	M. B. Marcellus, 901-3 Selling Bldg., Portland.....	
Oregon State Medical Association.....	E. A. Sommer, Portland.....	Claude A. Thompson, Muskogee.....	Scranton, Sept. 23-26, 1912.
Pennsylvania Medical Association.....	Charles L. Reeder, Tulsa.....	F. Arnold Clarkson, 471 College St., Toronto.....	
Pennsylvania, Med. Soc. of the State of.....	Herbert E. Bruce, Toronto.....	Cyrus Lee Stevens, Athens.....	
Rhode Island Medical Society.....	James Tyson, Philadelphia.....	S. A. Welch, 253 Washington st., Providence.....	
South Dakota State Medical Association.....	Federick T. Rogers, Providence.....	R. D. Alway, 212 Main st., Altheiden.....	
Tennessee State Medical Association.....	William G. Smith, Sidney.....	Edgar A. Hines, Seneca.....	Nashville, April 8-10, 1913.
Texas, State Medical Association.....	Chas. M. Rees, Charleston.....	Perry Bromberg, Nashville, 315 Jackson Bldg.....	Ogden, Oct. 1-2, 1912.
Utah State Medical Association.....	O. Duane, Dyersburg.....	H. Taylor, W. National Bank Bldg., Fort Worth.....	Monpelier, Oct. 10-11, 1912.
Vermont State Medical Society.....	Robert W. Fisher, Salt Lake City.....	C. H. Beecher, Burlington.....	Norfolk, Oct. 22-25, 1912.
Virginia, Medical Society of.....	F. T. Kidder, Woodstock.....	Paulus A. Irving, Farmville.....	
Washington State Medical Association.....	Hugh M. Taylor, Richmond.....	C. H. Thomson, Seattle.....	
West Virginia State Medical Society.....	Leon L. Love, Tacoma.....	Charles S. Sheldon, 251 Langdon st., Madison.....	
Wyoming State Medical Society.....	J. M. Dodd, Anbland.....	A. P. Butt, Davis.....	
	O. O. Henry, Fairmont.....	W. H. Roberts, Sheridan.....	Sheridan, September, 1912.

RATES FOR REPRINTS

100.....	\$1.00 per page
200.....	1.25 per page
500.....	1.50 per page
1000.....	2.00 per page

Covers to count as four pages when ordered

The Journal is owned and published by the Association, and all profit goes to make it better. Each member of the Association is financially interested in the Journal to the same extent as every other member, and each member is rightfully anxious for the financial success of the publication.

The greater this financial success, the greater the practical value can be made to the individual member, and hence the greater the value as an advertising medium.

Our advertisers, by their patronage, help to support the Journal, and make its successful publication possible. In return they expect, and rightfully, a fair return for their money. Every dollar spent by a member of the Medical Association of Georgia with advertisers in our Journal, in preference to non-advertisers, is a dollar spent in advancing his own personal advantage, for he has contributed something indirectly to the betterment of his own property.

The Journal cannot exist without the advertisers and their good will.

The advertisers cannot continue in business without the patronage of the medical profession.

The medical man cannot continue in business without the supplies for sale by the advertisers.

The interests of all are identical—the profession must depend upon the manufacturers, etc. The manufacturers, drug houses, etc., must depend upon the more progressive and more successful physicians. The interests of both are best served through the official Medical Journal—the Journal published by the profession in its own best interests, scientifically and ethically.

ADVERTISING RATES

1	Page 1 year.....	\$150.00
$\frac{1}{2}$	" 1 "	87.50
$\frac{1}{4}$	" 1 "	50.00
$\frac{1}{8}$	" 1 "	33.00
$\frac{1}{16}$	" 1 "	25.00
1	" 6 months.....	87.50
$\frac{1}{2}$	" 6 "	50.00
$\frac{1}{4}$	" 6 "	33.00
$\frac{1}{8}$	" 6 "	25.00
$\frac{1}{16}$	" 6 "	20.00
1	" 3 "	50.00
$\frac{1}{2}$	" 3 "	33.00
$\frac{1}{4}$	" 3 "	15.00
$\frac{1}{8}$	" 3 "	10.00
1	" 1 month.....	25.00
$\frac{1}{2}$	" 1 "	15.00
$\frac{1}{4}$	" 1 "	10.00
$\frac{1}{8}$	" 1 "	7.50

These rates do not apply to cover pages, space next to reading matter, or matter requiring to be reset.

Elixirs that are true to name.

Every medicinal elixir on our list contains exactly what the label says it contains.

We cannot emphasize this point too strongly.

When a physician prescribes one of our elixirs he does so upon our *guaranty* that the product is composed precisely according to the formula.

We take the position that any sacrifice of medicinal content to attain palatability is a fraud—a fraud upon both physician and patient.

An agreeable flavor in an elixir is an important desideratum. We don't undervalue it an iota. We get it in our elixirs—almost invariably—but not at the expense of manufacturing integrity.

For therapeutic efficiency, for palatability, for appearance, for stability, our medicinal elixirs are as near perfection as the art of pharmacy can make them. Specify them on your orders and prescriptions.

PARKE, DAVIS & COMPANY

Home Offices and Laboratories, Detroit, Mich.

Annual Meeting,

Index and Prog.

Journal of the Association of Georgia



PUBLISHED MONTHLY UNDER DIRECTION OF THE COUNCIL

Editorial and Business Office—300, 302 and 304 Harison Building.

Subscription Price, \$1.00

Entered as second-class matter, August 4, 1911, at the Post Office at Augusta, Ga., under the Act of March 3, 1879.

Vol. II

AUGUSTA, GA., APRIL, 1913.

No. 12

OUT THREE WEEK'S WHEN REPRINTED.

DeLee's Obstetrics

Dr. M. A. Hanna, Professor of Obstetrics, University Medical College, Kansas City:

"I am frank in stating that I prize it more highly than any other volume in my obstetric library, which consists of practically all the recent books on that subject."

Dr. George L. Broadhead, Professor of Obstetrics, New York Post-Graduate Medical School:

"The name of the author is in itself a sufficient guarantee of the merit of the book, and I congratulate him, as well as you, on the superb work just published."

Dr. George M. Boyd, Professor of Obstetrics, Medico-Chirurgical College of Philadelphia:

"Let me congratulate you on the splendid illustrations and other superior qualities of publication of Dr. Lee's Obstetrics."

Three octavos, averaging 950 pages each, illustrated. By 82 eminent specialists. Edited by John H. Musser, M.D., and A. O. Jelly, M.D., of Pennsylvania.

Per volume: Cloth, \$6.00 net; Half Morocco, \$7.50 net.

SEND FOR CIRCULAR.

W. B. SAUNDERS COMPANY

West Washington Square

Philadelphia, Pa.

N. Ellis, Atlanta.....	375
Milledgeville.....	381
B., M.D., Atlanta.....	385
, Atlanta.....	388
arnest, M.D., Atlanta.....	391
By Wm. S. Goldsmith, M.D., Atlanta.....	392
Seukaemia with an Unusually High Sencocyte Count. B	394
ata.....	394

EDITORIALS

for the Savannah Meeting.....	397
-Laws of the Medical Association of Georgia.....	401
ation of State and Municipal Health Officials.....	405

SELECTED ARTICLES

Why America Has Dug the Panama Canal.....	396
---	-----

VOLUME INDEX.

Authors.....	406
Titles of Papers.....	407- 408

PANOPEPTON

Affords the nutrition to be derived from the entire soluble substance of prime lean beef and the entire soluble substance of whole wheat presented in a highly diffusible form in a sterile agreeable solution.

PANOPEPTON

Makes no demand upon the energy of the patient; on the contrary, is instantly available in conserving and reinforcing energy.

Literature giving full information about Panopeption, and analysis has always been freely submitted to the physician; will be sent upon request.

FAIRCHILD BROS. & FOSTER

NEW YORK



Dr. W. W. PILCHER
Warrenton.
President Medical Association of Georgia, 1912.

Journal of the Medical Association of Georgia

W. C. LYLE, M.D., Editor - Augusta, Georgia

OFFICERS

President.....W. W. PILCHER, M.D., Warrenton
First Vice-Pres.....J. W. PALMER, M.D., Ailey
Second Vice-Pres.....T. H. HALL, M.D., Macon
Sec.-Treas.....W. C. LYLE, M.D., Augusta

COUNCILORS

First Dist.—J. Lawton Hiers, M.D.....Savannah
Second Dist.—Gordon Chason, M.D.....Bainbridge
Third Dist.—V. O. Harvard, M.D.....Arabi
Fourth Dist.—C. L. Williams, M.D.....Columbus
Fifth Dist.—J. N. Ellis, M.D.....Atlanta
Sixth Dist.—R. H. Stovall M.D.....Macon
Seventh Dist.—W. P. Harbin, M.D.....Rome
Eighth Dist.—I. H. Goss, M.D.....Athens
Ninth Dist.—W. B. Hardman, M.D.....Commerce
Tenth Dist.—W. J. Cranston, M.D.....Milledgeville
Eleventh Dist.—A. G. Little, M.D.....Valdosta
Twelfth Dist.—E. T. Coleman, M.D.....Graymont

VICE-COUNCILORS

First Dist.—A. J. Mooney, M.D.....Statesboro
Second Dist.—C. K. Sharpe, M.D.....Arlington
Third Dist.—A. G. Crittenden, M.D.....Shellman
Fourth Dist.—T. S. Bailey, M.D.....Newnan
Fifth Dist.—F. K. Boland, M.D.....Atlanta
Sixth Dist.—J. H. Riley, M.D.....Haddock
Seventh Dist.—J. H. Hammond, M.D.....LaFayette
Eighth Dist.—E. G. Adams, M.D.....Greensboro
Ninth Dist.—J. S. Tankersley, M.D.....Ellijay
Tenth Dist.—G. L. Carpenter, M.D.....Wrens
Eleventh Dist.—J. G. Tuten, M.D.....Jesup
Twelfth Dist.—M. L. Currie, M.D.....Vidalia

STANDING COMMITTEES

Scientific Work

E. E. Murphey, M.D., Chairman.....Augusta

V. H. Bassett, M.D.....Savannah
W. C. Lyle, M.D., ex-officio.....Augusta

Medical Defense

M. A. Clark, M.D., Chairman.....Macon
J. N. Ellis, M.D.....Atlanta
E. T. Coleman, M.D.....Graymont
J. G. Dean, M.D.....Dawson
E. G. Jones, M.D.....Atlanta

Organization

T. J. McArthur, M.D., Chairman.....Cordele
G. R. White, M.D.....Savannah
W. B. Hardman, M.D.....Commerce

Public Policy and Legislation

J. R. Littleton, M.D., Chairman.....Augusta
W. L. Champion, M.D.....Atlanta
C. C. Harrold, M.D.....Macon
President and Secretary, ex-officio

Necrology

V. D. Lockhart, M.D., Chairman.....Maysville
W. B. Emery, M.D.....Atlanta
S. S. Smith, M.D.....Athens
M. F. Carson, M.D.....Griffin
J. M. Hull, M.D.....Augusta

Arrangements

(Committee to be selected by the Chatham
County Society)

Delegates to American Medical Association

W. H. Doughty, M.D.....Augusta
E. G. Ballenger, M.D. (alternate).....Atlanta
T. J. Charlton, M.D.....Savannah
T. R. Wright, M.D. (alternate).....Augusta

DRAINAGE SEQUENT TO CERTAIN SURGICAL PROCEDURES.*

Dr. Jas. N. Ellis, Atlanta.

For the past few years I have been using a method of drainage, sequent to certain surgical procedures, which I have found so satisfactory and efficient, that I desire to submit it to the profession at large. Take, for instance, drainage of the gall bladder. Practically all surgeons use some method or device for collecting the outflow of bile incident to drainage of this viscus following cholecystostomy. This is done, obviously, to prevent the otherwise inevitable biliary saturation of

dressings and the consequent necessity of frequent change. Of the methods in use for this purpose, possibly the most popular and simple is the use of a bottle into the open mount of which is fastened the distal end of the drainage. This bottle has to be watched constantly, removed when full, emptied, sterilized, and re-applied.

The disadvantages of this method are evident. The patient is annoyingly conscious of the presence on his or her abdomen of an open-mouthed bottle containing a fluid which must not be spilled. The slightest movement causes anxiety for fear of soiling the dressings or inundating the bed with what, to them, is a repulsive fluid and, consequently, they occupy a constrained, recumbent position for days, or, what more commonly happened in my experience, necessary or involuntary

*Read at meeting of Medical Association of Georgia, Augusta, April, 1912.

change of position resulted in daily soiling of the dressings or bed or both.

Appreciating the disadvantages of this method, Dr. George Cook adopted the following procedure: Around the distal end of the drainage tube (which is allowed to project $1\frac{1}{2}$ or 2 inches beyond the abdomen through the first layers of the dressing) is firmly tied an extra large and extra thick condom or rubber sac, which is well surrounded and covered by cotton, all of which is finally enveloped by a snugly fitting abdominal binder. It is claimed for this method that, an artificial gall bladder is made which lies in close proximity to the natural biliary reservoir which it is desired to drain. The objection to this method is that this so-called artificial gall bladder has to be removed once or twice in every 24 hours, emptied, thoroughly cleansed, and again replaced, thus daily subjecting the patient to the possibility of postoperative infection and affording no security, except that of gravity, against the back-flow of bile from the artificial, into the natural, biliary reservoir.

In seeking to eliminate the disadvantages and objections incident to the use of the typical methods above described, I utilized, at first a somewhat, different form, the reservoir, which I now submit to you. As you see, it consists of a collapsible, soft rubber bag, with a capacity of some 12 ounces. The under surface is interrupted by a loop for attachment to the scultetus, binder or adhesive strap with a safety pin, or through which passes a soft rubber band for use when it is desired to anchor it to the thigh. The upper extremity terminates in a projecting, hard rubber connection, or intake, over which passes the distal end of the drainage tube. Just beneath this, on the inside of the bag, is an air-tight, soft rubber valve or trap, permitting the free inflow of bile or other drainage fluids or gas, but so designed as to prevent the return of either air or fluid into the cavity which is being drained. At the lower extremity is a vulcanite stop-cock, permitting evacuation of the contents of the bag into a pus basin or other receptacle without detaching it from the drainage tube.

The fact that no metal is used in its con-

struction permits of easy sterilization by solutions of bi-chloride of mercury or other antiseptics, or by moist or dry heat. The same bag, in this way, may be used repeatedly if the nurse is cautioned to dry it thoroughly and blow powder into the valve, after the manner used for the preservation of rubber gloves.

The various uses of this reservoir will suggest themselves to the surgeon. While primarily intended as a receptacle for drainage of the biliary bladder, after cholecystostomy, it has been found applicable and useful in several other conditions. In draining the gall bladder, a smooth rubber drainage tube or, preferably, a No. 16 or 18 A. S. soft rubber catheter is fixed in the bladder, after the method of Senn in gastrostomy, and attached to the margins of the abdominal incision. Some 6 or 8 inches of the tube should project through the dressing and the distal end be passed over the hard rubber connection of the reservoir, which is then anchored to the binder or adhesive strap with a safety pin. The nurse is instructed to evacuate its contents p. r. n. The tube and bag are usually removed about the eighth or tenth day, by which time primary union of the incision will have occurred, and the gradually decreasing drainage subsequently collects in the dressing.

In supra-pubic cystostomy of the urinary bladder, when more or less permanent drainage is desired, it is similarly used and applied. After external urethrotomy or perinaeal prostaticotomy, a Pezzer's self-retaining catheter is substituted for the one of ordinary make, the bulbous termination of this instrument so closely approximating the inner wall of the bladder that no purse-string suture is necessary to prevent leakage around the tube.

After thoracotomy, with collapse of the lung as a sequent, its use assures a negative atmospheric pressure in the drainage tube, permitting egress of air and fluid with each expiration with no possibility of intake, thus quickly emptying the cavity of gas or air or fluid and, incidentally, favoring the frequently urgently desired expansion of the collapsed lung, accomplishing in a few hours, in this way, what Sauerbrück's air chamber is de-

signed to prevent during operation. It is thus useful after operation in pleurisy with effusion, in pneumothorax with or without serous or sero-purulent effusion, in empyema and in hemothorax, after the blood clot is broken down, and only a bloody fluid is left in the cavity.

Parenthetically, in this connection, it may be mentioned that the main obstacle to an ideal result in thoracotomy is collapse of the lung due to ingress of air on opening and draining the pleural sac. When the lung as a result of this positive atmospheric pressure within the pleural cavity, cannot expand sufficiently, for the visceral layer to remain in contact with the costal pleura, a secreting cavity is left between the layers of the pleura, the wound shows no tendency to heal, and we are left to deal with chronic fistulae and sinuses, frequently necessitating for their cure such mutilating operations as those of Estlander, Simon-Kuster or Schede. This unsatisfactory result so commonly followed ordinary methods of drainage of this cavity that such men as Thiersch, Rochelt, Schede, Perthe and Sauerbruck displayed industry, originality and ingenuity in devising means and constructing apparatus to prevent collapse or promptly effect re-expansion of the lungs.

In the various serous cysts of the abdominal cavity, such as pseudo-pancreatic, meso-colic, etc., in which it is inadvisable to attempt, or impossible to execute, excision of the cyst-wall, the use of this reservoir fulfills all requirements and has given me much satisfaction.

Permanent drainage of the abdomen in certain varieties of ascites, such as recurrent ascites due to hepatic cirrhosis, may be safely and effectually carried out by the intelligent use of this reservoir. A smooth, soft rubber catheter, of appropriate size, is anchored in the small preliminary suprapubic incision and the protruding end attached to the bag. In this way the drainage suggested by Dr. Caille, or in combination with epiploxy (Talma's operation) as advocated by Moynahan and Morrison, may be kept up for weeks and, in the event of the establishment of a good collateral circulation, improvement of the underlying condition for long periods may

be confidently expected. In the female this procedure may be conveniently effected through a vaginal puncture into Douglas' Cul-de-sac.

The use of the reservoir in these various conditions obviates the necessity of daily, oft-repeated change of dressing; it reduces the danger of post-operative infection to the minimum; adds much to the comfort of the patient; and materially influences for the better the mortality statistics of the surgeon who uses it intelligently.

PSYCHOSES ACCOMPANYING PELLAGRA.*

Dr. E. M. Green, Milledgeville.

The 75 cases on which this study is based were all admitted to the State Sanitarium during the year 1911. The diagnosis of pellagra was made in every instance from the evidences of that disease which were present at the time of admission, namely; symptoms referable to the skin, mouth and intestinal tract. Cases of pellagra which developed subsequent to the patients' reception are not included here.

In considering the subject of psychoses accompanying pellagra it is necessary to decide first the question whether the two conditions, insanity and pellagra, appear in accidental association, that is; whether their appearance in the individual is a coincidence merely or whether one condition depends upon the other. This decision might present some difficulty where inferences are to be drawn from observation of a small number of cases; but where in a large number of cases is found the simultaneous appearance of pellagra and insanity in a previously normal individual as occurred in eight cases of this series, or where after pellagra has existed for a few weeks or months insanity is manifested, or where, as is found in a smaller number of cases of this series, several attacks of pellagra have occurred each one accompanied by an outbreak of insanity from which the patient recovers as the physical disease disappears, the conclusion

*Read at meeting of Medical Association of Georgia, Augusta, April, 1912.

that pellagra must be the cause of the mental disorder, is indisputable.

Of the 33 cases, in which the duration of both pellagra and insanity could be ascertained, it was found that the average duration of the former disease was six months and seventeen days before the appearance of the mental symptoms.

In instances where insanity has existed prior to the appearance of pellagra, it is necessary to determine also whether the mental disturbance can be accounted for by the influence of the toxins of the physical disease upon the central nervous system, as the disease may exist for some time before its external evidences are manifest, or whether insane individuals are suffering from an attack of pellagra.

Evidences of mental disorder accompany a large proportion of the cases of pellagra, but these symptoms vary widely in given cases, and offer no uniform grouping characteristic of this disease. Certain of these symptoms, however, occur with sufficient frequency to justify a suspicion of its existence even in the absence of external manifestations. In some cases of pellagra the mental symptoms do not simulate those of any recognized form of insanity, while in others it approaches them so nearly as to offer ground for doubt as to whether such cases should be classified with the psychosis the symptoms of which they simulate or as types only of a psychosis which depends upon the presence of pellagra.

In regard to the classification of insanity associated with pellagra several views are prevalent. Some observers believe that "pellagrous insanity" is an entity, as much so at least as is general paralysis, and should form a special classification group. Others hold that insanity resulting from pellagra is an infective-exhaustive process and should be grouped with the infective-exhaustive psychoses. Others still, believe that the condition depends upon an intoxication, and class these cases with the toxic psychoses. Many physicians of experience recognize pellagra as the exciting cause of the insanity, but as the symptoms in given cases vary so greatly they prefer to classify the resulting

psychosis, according to its symptoms, with the recognized groups they simulate.

In the unsettled state of our knowledge of this disease it is wiser not too commit ourselves to any of these theories, but to speak of "psychoses accompanying pellagra" and to subdivide this group into types as the symptoms approach those of accepted forms of insanity.

In the 75 cases admitted during the past year, in which was made a diagnosis of "psychosis accompanying pellagra," the following types were noted:

Infective-exhaustive type.....	35
Manic-depressive type.....	11
Dementia praecox type.....	11
General paralysis type.....	4
Senile type.....	4
Involution melancholia type.....	2
Type undetermined.....	8

The above sub-groups do not, however, exhaust the possibilities of pellagra as any form of mental disorder may accompany this disease.

It will be seen that the infective-exhaustive type was the one most frequently encountered during the past year, and that it formed 46.6% of the whole number. The symptoms deciding this subdivision of the general group are such as are found in other infective-exhaustive conditions, namely: clouding of consciousness, confusion, hallucinations, changeable delusions, apprehensiveness and restlessness, but there seems to be in the cases accompanying pellagra less disturbance of orientation and memory with a greater preservation of insight than is usually seen in infective-exhaustive psychoses which result from other causes. These cases are in addition associated with symptoms referable to the nervous system—headache, vertigo, feelings of bodily weakness, increase of deep reflexes, disturbance of sensation and various motor symptoms. In this type the psychosis may appear as an initial delirium, a collapse delirium, a post-infective psychosis, an amentia or an acquired neurasthenia.

The following case abstract illustrates this type:

N. L., white, male. Age. 28. Married. Mechanic.
Duration of pellagra.....8 months.

Duration of insanity.....6 weeks.

Nervous symptoms—Subjective complaints of headache, vertigo, insomnia, numbness of extremities. Exaggeration of deep reflexes.

Mental symptoms—Clouding of consciousness, confusion, restlessness, apprehensiveness. Delusions of persecution. Auditory and visual hallucinations. Slight disturbance of orientation for time and place. Impairment of attention and retention. Impairment of memory for recent events. School knowledge and general information meagre. Counting and calculation defective. Partial preservation of insight. Judgment much impaired.

The manic-depressive type is characterized by the general features of manic-depressive psychosis, but there seems to be a deeper clouding of consciousness and a prominence of hallucinosis not often found in the latter condition. In addition may be noted, headache, vertigo, exaggeration of deep reflexes, tremors, inco-ordination for voluntary movements, sensory disturbances and impairment of articulation. One of the patients in this group gave a vague history of previous attacks of insanity, but whether they were accompanied by pellagra was undetermined. One depressed case was said to have had several periods of excitement, though the dates of these manifestations were not given. A third patient while in this hospital was observed to pass through a typical manic attack, which was followed two months later by a depressive attack characterized by depression, retardation and slowness of movement. States of elation with increased psychomotor activity and flight of ideas are less often encountered than those with depression, decreased psychomotor activity and retardation of thought. In the absence of external evidences of pellagra or a history of that disease a differential diagnosis may be impossible.

The following case abstracts illustrate respectively the manic and the depressive forms of this type:

T. B., white, female. Age 34. Married. Housewife.

Duration of pellagra.....unknown

Duration of insanity.....one month

Nervous symptoms—Not satisfactorily determined, owing to excitement and resistance.

Mental symptoms—Excitement, exaltation, increased psychomotor activity, distractibility, flight of ideas, pertness and irrelevance, boisterousness, destructiveness and filthiness. Disorientation for time, place and person. Absence of insight. Impairment of judgment.

M. N., white, female. Age 38. Cotton mill operative.

Duration of pellagra.....five months.

Duration of insanity.....three months.

Nervous symptoms—Subjective complaints of lassitude, frontal headache, darting pains in all portions of body. Exaggeration of deep reflexes. Coarse tremor of fingers. Fine tremor of tongue. Speech slurring.

Mental symptoms—Depressed, agitated, apprehensive. Weeps. Delusions of sin, soul is lost, has been drugged or tricked, is disgraced. Fears future punishment. Slow in thinking. Moves slowly. Visual and auditory hallucinations. Suicidal. Orientation disturbed for time. Memory for recent events less disturbed than for remote. Grasp on general information and school knowledge impaired. Counting and calculation defective. Insight partially preserved. Judgment much impaired.

The dementia praecox type may be distinguished by the presence of emotional indifference, inattention, tendency to seclusiveness, hallucinations and deterioration. In some cases katatonic symptoms are prominent. Delusions of persecution and of influence are frequently expressed, while violent excitements of varying duration are not rarely observed. In these cases are noted also subjective complaints of headache, vertigo and sensory disorders. Vasomotor disturbances are common. Exaggeration of the deep reflexes, twitching of the facial muscles, tremors, unsteadiness of gait and rarely convulsive attacks of greater or less severity are met with. Many of these symptoms may be noted in the abstract of case No. 2099.

S. S., negro, male. Age 30. Single. Occupation, unascertained.

Duration of pellagraunknown.

Duration of insanity.....six months.

Nervous symptoms—Headache, exaggeration of all deep reflexes. Fine tremor of tongue and fingers. Twitching of muscles about eyes and mouth.

Mental symptoms—Seclusive. Indifferent. Inattentive. Not spontaneously productive, but makes contradictory replies to questions. Mannerisms, grimaces, impulsive movements and cries. Neologisms. Delusions of influence, poison and persecution. Auditory and visual hallucinations. Orientation for time disturbed. Memory for recent and remote events slightly impaired. Grasp on school knowledge and general information well preserved. Insight partially preserved. Judgment profoundly disturbed.

Like the syphilitic poison, that of pellagra seems to have a decided affinity for the nervous system, and at times gives rise to symptoms which temporarily at least cannot be differentiated from those of general paralysis or cerebral syphilis. To render the diagnosis more confusing a history of previous syphilitic infection is given by no small number of individuals suffering from pellagra, and there arises the question, to which disease the symptoms shall be attributed. All physical symptoms which occur in general paralysis may be encountered in pellagra with the possible exception of the Argyll-Robertson pupil, though changes in pupillary outline and reaction are less frequent in the latter disease. Paralysis of the ocular muscles was not observed in any case of this series. Epileptiform and apoplectiform seizures are more common in general paralysis, but they occur as well in a number of pellagra cases.

Nor is examination of the cerebrospinal fluid of great service in differentiating the two conditions, as its results may be identical in both. There seems, however, from the examinations made by Dr. Hindman, the Pathologist of the State Sanitarium, to be as a rule a smaller number of cells in the spinal fluid of pelagrins, as well as a lower percentage of lymphocytes and plasma cells with a higher percentage of polymorphonuclear cells. The results of the butyric acid test are the same in both

conditions and by both Fehling's solution is reduced.

The duration of this type of psychosis accompanying pellagra is shorter than that of general paralysis, death occurring usually within a few months.

The difficulty encountered in differentiating the two conditions is illustrated by the following case abstract

T. D., negro, female. Age 20. Single. Farm laborer.

Duration of pellagra.....twelve months.

Duration of insanity.....two months

Nervous symptoms—Vertigo. Exaggeration of deep reflexes. General coarse tremor. Unsteady gait. Romberg sign. Pupils irregular and unequal. Pupillary reaction to light and accommodation sluggish. Speech sticking and drawling. Sphincters not under control.

Mental symptoms—Noot spontaneously productive. Replies to questions with apparent effort. Claims to be happy. No delusions or hallucinations expressed. Disorientation for time, place and person. Retention quite poor. Counts fairly well but unable to reverse. Calculations accurate for only the simplest problems. General information and school knowledge meagre. Insight lacking. Judgment much impaired.

Spinal fluid:

Total cell count.....	24
Lymphocytes	27.2%
Plasma cells.....	9.9%
Polymorphonuclear cells.....	31.8%
Endothelial cells.....	20.7%
Unknown elements.....	9. %
Butyric acid test positive.....	

The symptoms of the senile type are apt to be manifested at an earlier period of life than is the usual senile psychosis, and the condition presents physical accompaniments, which are commonly observed in states depending upon vascular degeneration. Memory disturbance is of the character encountered in senile psychoses, while emotional irritability with suspicions of relatives is common to both conditions. In pellagra, however, orientation and insight may be preserved, and recovery may take place within a few months.

The patient, whose case abstract is used to illustrate this type, has apparently

made a complete recovery, though the impairment of vision and hearing still exists.

N. C., white, male. Age 42. Married. Salesman.

Duration of pellagra.....five months.

Duration of insanity.....two months.

Nervous symptoms—Impairment of sight, hearing and smell. Subjective complaints of pins and needles over back and legs. Deep reflexes somewhat increased, except and Achilles reflex which is diminished. Slight Romberg. Coarse tremor of tongue and fingers. Sphincters not under control.

Mental symptoms—Depression. Irritability. Violence. Fear of poison. Relatives rob him of his property and wife alienates his children's affections. Visual and auditory hallucinations. Orientation undisturbed. Memory impaired for recent events. Grasp on school knowledge good, but on current events poor. Counting and calculation good. Insight preserved. Judgment impaired.

The symptoms of the involution melancholia type are for the most part those of involution melancholia, but in addition are found nervous symptoms, which may be attributed to the accompanying physical disease.

This type is illustrated by the following case abstract:

T. G., white, male. Age 62. Married. Machinist.

Duration of pellagra.....seven months.

Duration of insanity.....five months

Nervous symptoms—Subjective complaints of headache, nervousness, pain in back and burning sensations in feet. Tactile sensibility impaired over feet. Knee jerks diminished. Tremor of tongue.

Mental symptoms—Despondency. Ideas of sin. Self reproach, persecution and suicide. Complaints of imaginations and frightful dreams. Memory for remote events impaired. No clouding of consciousness. Absence of retardation. Insight lost. Judgment much impaired.

The unclassified type includes a group of cases, in which the symptoms are indefinite, or in which inaccessibility precludes their being elicited, or in which the

symptoms elicited do not simulate those of any recognized form of insanity.

The following case abstract is given as an example of this type:

D. B., negro, male. Age 28. Married. Farmer.

Duration of pellagra.....seven months.

Duration of insanity.....twenty-eight days.

Nervous symptoms—Headache. Drowsiness. Exaggeration of deep reflexes. Absence of abdominal reflex. Ankle clonus. Fine tremor of tongue and fingers.

Mental symptoms—Worried, Apprehensive. Dissatisfied. Restless. Foolish actions. Talks and prays aloud. Retention defective. Inaccessible to further examination.

The criticism may be made that in the foregoing pages have been described examples of the recognized psychoses, in which pellagra was merely the exciting cause as may be other physical disease. Such criticism is plausible, but in the series of cases studied, associated with the symptoms of the psychoses simulated, are found additional ones which are foreign to the usual course of such cases, besides quite noticeable nervous manifestations which do not accompany these psychoses, and which we are justified in attributing to the disease, pellagra.

To this combination of nervous and mental symptoms, so often found associated with pellagra, is due the adoption of the classification group "psychoses accompanying pellagra," which will serve its purpose if it leads to a better understanding of these cases.

CASE HISTORIES IN NEUROLOGY.*

Lewis M. Gaines, A.B., M.D., Atlanta.

To my mind one of the most interesting and instructive ways in which medical subjects can be presented is in the form of case histories, which within the past few years has been so popularized by Dr. Richard Cabot, of Boston, and his associates. Instead of imposing upon one's audience an abstract discussion of some disease, it is frequently more illuminating

*Read at meeting of Medical Association of Georgia, Augusta, April, 1912.

to present case histories. In this way the cases are presented in the same manner in which they present themselves to the physician in his daily work, and thus the presentation constitutes a very practical and very natural method. In diseases of the nervous system as perhaps in no other class of diseases is it so essential to obtain from the patient an exact recital of the symptoms, and then to make a most detailed examination, leaving as far as possible nothing whatever undetected. Such an examination takes not hours but days for successful completion in complicated cases. Then if a diagnosis is possible it follows as a matter of logic. At times the diagnosis hangs literally by a hair. Thus it was recently related to me by a friend who was a former assistant of Sir William Gowers, of London, the famous English Neurologist, that the diagnosis and localization of a spinal cord tumor turned on the fact that the abdominal reflex tired more easily on one side than, on the other. Laminectomy was performed, the tumor successfully removed and the patient restored to health. This recital leads me to quote a sentence from Dr. Joseph Collins, of New York, one of the most acute observers of the day in the field of neurology. Saye he, "The taunt that the neurologist can do nothing for his patient save make a diagnosis no longer pierces, so far removed is it from the truth, which is that more can be accomplished in the domain of nervous diseases, given the facilities, than in the majority of other fields of medicine." To this observation of Dr. Collins, I am justified in adding that never before in the history of medicine has so much been done for the relief and cure of nervous diseases, as at the present time. But results depend upon accurate diagnosis.

I now beg to present the following cases for your consideration:

Case 1. A gentleman 32 years of age, married, was referred to me by Dr. E. C. Davis, of Atlanta, on Dec. 22, 1911. In June 1910 while carrying a child down some steps, suddenly the right arm began to twitch, and feel peculiar. He did not drop the child however. He became dizzy but did not fall. During the 18 months which have elapsed since this first attack,

there have been at irregular intervals, 15 to 20 such seizures. Usually a feeling of dryness in the throat precedes the attack, then there is a feeling of dizziness, and spasmodic movements begin always in the right hand and arm. Occasionally the twitching movements extend upward to the shoulder, and the entire limb may become painfully cramped.

Usually accompanying this localized spasm would be a feeling of dizziness, which has occasionally caused the patient to fall. Several times he has quickly sat down to escape from falling. The patient who is in active professional life and constantly before the public has successfully hidden from all but his closest friends the existence of these attacks, but their continued occurrence has caused him intense worry, and he has been haunted by the fear lest an attack should surprise him when he could not conceal it. Too this mental state is also added an increased irritability of temper. He has gradually gotten weaker but lost no flesh. His gait has become increasingly unsteady. This unsteadiness has been especially marked on first arising from a sitting posture. Recently he has experienced a certain amount of numbness and pins and needles sensation in the left hand. The hearing and vision have been excellent. There has been no involvement of the sphincters, and no impotence. Headaches have been present only recently but not very severe. Aside from the symptoms just detailed he makes no complaints.

His family history is entirely negative. He has had no disease save typhoid, 10 years ago, uncomplicated. The existence or possibility of venereal infection he vigorously denied. He has consumed a moderate amount of alcohol. At the age of nine years he was thrown from a horse striking on his head and remaining unconscious for a half hour. He soon recovered and has suffered no further inconvenience from the incident.

The patient is a medium sized well developed and nourished man. His station is somewhat unsteady, especially when first standing, but becomes steady in a moment. The gait on first rising is definitely ataxic. There are no forced move-

ments. There is no tremor, spasm inco-ordination or paralysis. The deep and superficial reflexes are increased. No Babinski phenomenon, no ankle clonus. The eyes show normal mobility. The pupils react well to light and accommodation and are equal in size. There is no subjective complaint of difficulty in vision. No nystagmus present. Upon ophthalmoscopic examination by Dr. Dunbar Roy, however, there was an intense grade of double choked disc.

Sensation most carefully tested was everywhere normal. The viscera were all normal. There was no positive Wassermann reaction.

Diagnosis. The slow progressive character of the disorder, localized spasms, station and gait, mental changes, and finally headaches and double choked discs indicated the co-existence of increased intracranial pressure and a cortical or sub-cortical irritative lesion, probably in the neighborhood of the left motor area. The diagnosis of brain tumor was accordingly made. The patient was advised to have an exploratory operation done. At the operation, by Dr. Cushing, a condition of excessive intracranial pressure was found, and a small mass located beneath the cortex, not admitting of immediate removal. A simple decompression operation was done, and an opening left in the hope that the mass would eventually sufficiently extrude to admit of removal. The patient's symptoms were all greatly relieved by the operation. When last I heard from him, he was in a state of comfort, though the second stage had not been done. This patient was for 18 months considered to be simply a neurasthenic, and I relate his case as a warning against such a diagnosis.

Case 2. A young man 28 years of age, married, a carpenter by occupation came complaining of quick shooting pains which traveled from hips to feet, easy fatigability, uncertain gait and station, swollen knee, which had been painful, dribbling of urine and difficulty in voluntary urination and defecation. Once or twice there has been transient diplopia. The pains had existed for 18 months, uncertain gait for 3 or 4 months, the swollen knee for 2

weeks. The course of the trouble has been progressive. Previous history discloses the fact that the patient had a chancre 10 years ago, and therefor received 5 injections of mercury, and one box of pills, which when consumed sufficed in his mind to eradicate further trouble. His alcoholic consumption has been limited to 5 or 6 pints of beer daily.

The patient is a well nourished man of vigorous appearance. Examination of his skeletal system shows a swollen left knee. The joint contains a moderate amount of fluid. There is no redness, pain or erosion of the articular surfaces, and as yet no laxity of the ligaments. The station shows a slight Romberg, and the gait is slightly ataxic more marked when the patient attempts to walk a line. There is no paralysis, tremor or spasm. Slight hypotonus is evident in the lower limbs, and slight pedal inco-ordination. The knee jerks are absent even or re-inforcement, as are also the ankle jerks. The superficial reflexes are absent or diminished. There is no clonus and no Babinski.

Examination of the eyes shows the right pupil to be slightly larger than the left. There is no re-action of the pupils to light, but a normal response on accommodation. The vision is normal. Sensation is everywhere normal except over a small area of the skin from over the second rib to the third interspace on the left as far back as the anterior axillary line. Over this area there is hypaesthesia and hypalgesia. The special senses are intact, and there is no defect in speech. The viscera appear normal.

In this case the Wassermann reaction was definitely positive in both the blood serum and the spinal fluid.

Cassamajor and Kaplan have recently demonstrated the diagnostic and prognostic value to be derived from the study of the spinal fluid obtained by lumbar puncture. This study comprises (1), the application of the Wassermann test to the fluid, which may be positive here and negative in the blood serum, (2) the test for globulin, (3) the cell count, and (4) the Ferling test. They conclude that the hyperlymphocytic and positive serum Wassermann types of Tabes are the ideal forms

of the disease for successful treatment, and that this increase of lymphocytes in the spinal fluid is the expression of an exudative process. The presence of large numbers of polynuclear cells, they consider to be significant of an acute meningitic process, leutic or otherwise. The diminution or disappearance of the polynuclear cells is considered a favorable prognostic sign. At one time it was questioned whether salvarsan would have any effect upon the remote effects of syphilis as expressed in the nervous system. In the cases which neuroserological examination promises a hopeful outcome (hyperlymphocytic and positive serum Wassermann type) the results have been positively brilliant.

To return to the case under discussion, the patient's spinal fluid showed a hyperlymphocytosis, and his serum a positive Wassermann. These results together with his ataxic gait, Romberg sign, Argyll-Robertson pupils, sphincter involvement, lightning pains and arthropathy establish his case as tabes dorsalis and further as a case of very favorable prognosis as regards arrest, and probable re-establishment of lost functions to a marked degree by appropriate exercises. He received .4 gm. of salvarsan intravenously. As yet sufficient time has not elapsed to report definite results in his case, but judging by a number of cases of tabes of identical neurological findings the prognosis is most excellent. It has not been long since tabes was regarded as a hopeless disease. The outlook for the tabetic is now vastly improved, provided he is seen early enough.

The above cases are presented not because of their rarity but because of their frequency. Tumors of the brain and spinal cord occur with far more frequency than is generally believed, and are frequently undiagnosed. The case of tabes whose history I have read was treated for some time as rheumatism. Tabes frequently escapes detection in the early stages especially, when the diagnosis may mean saving the patient from a succession of horrors.

1314 Empire Building.

PARSIMONY IN NUTRITION.*

George M. Niles, M.D.

Professor of Gastroenterology and Therapeutics,
Atlanta School of Medicine,
Atlanta.

This title, parsimony in nutrition, suggested by a recent address of an eminent English research worker, represents a wide-spread dietetic movement in this country, which I view with both interest and concern. Previous to this century, throughout the history of the advancing civilizations of the earth, there has never been any concerted movement directed toward such parsimony; and, with the exception of certain ascetic orders, whose habits of self-denial were either religious or esthetic, the desires for food have been universally gratified, subject only to the limitations of purse or environment. The doctrine that a strong body should be generously nourished, and that a virile people should be hearty eaters, was of world-wide acceptance. Furthermore, it was noted that the liberal consumers of the flesh proteins figured most largely in the arts of both peace and war, while the vegetarian nations either lagged behind, or were the servitors of their meat-eating masters.

In accordance with these historic and economic facts, certain dietetic standards have been fixed, these standards being the aggregate results of statistical and experimental studies carried out by many physiologists on numerous large groups of individuals under varying circumstances. These results were collected by Atwater, of this country, and Voit, of Munich, who found that an average individual, under ordinary conditions, thrives on a daily allowance of 118 grams of protein food; 56 grams of fat, and 500 grams of carbohydrates, such as sugar and starch, this containing 3,055 large calories, or heat units. Under increased physical exercise this was raised to 3,370 calories. These findings were approximated by a large number of independent observers, most of them, however, allowing a slightly higher daily protein ration.

An ad in The Journal of the Medical Association of Georgia will bring results.

*Read at meeting of Medical Association of Georgia, Augusta, April, 1912.

These standards having been settled with supposed immutability, all was serene, until there appeared in the dietetic firmament a new galaxy. We were thereupon informed that those theories drawn from the dietetic experience of untold millions of progressive and militant human beings, were altogether erroneous; and, like the man with the eight-day clock, who wound it up every night, for twenty-five years before discovering his error, we have been partaking of double or treble the amount of protein necessary for our well-being. In other words, we might say that, after these eons, the light has just broken in, opening up to us a new heaven and a new earth.

The advance guard of this new thought was Mr. Horace Fletcher, a gentleman of intelligence and culture, who, finding himself obese, dyspeptic, and in declining health, accidentally discovered that by slow, deliberate eating he was much benefited. Being both observant and analytic, he reasoned out a theory that the whole process of bodily nutrition is materially affected by the preliminary treatment of food in the mouth; furthermore, he became satisfied that by most thorough mastication and insalivation less food is required for adequate nutrition, while bodily conditions are improved. He sums up his philosophy as follows: "If you eat only when you have an earned appetite, masticate your food thoroughly, and take great care to eat only what your appetite approves, the rest will take care of itself."

Like many other fads containing elements of truth, this "chewing fad" attracted a circle of adherents, and, fortunately for Mr. Fletcher, it caught the ear of some level-headed physiologists, among others the late Sir. Michael Foster, of Cambridge, England, and Dr. Van Someren, of Venice, the latter of whom read a paper on "Fletcherism" before the Congress of Physiologists at Turin, in 1901. This led to a series of experiments at Cambridge, which were later continued in America by Professor Chittenden, of Yale, the latter, however, losing sight of the chewing feature, except as it lessened the craving for food, and hinging his experiments on the momentous question: What

is the proper daily protein ration best suited to meet the requirements of the average human body?

The investigations of Professor Chittenden are in some respects epoch-making contributions to physiology. The experiments were on groups of professional men, army volunteers, athletes and animals, and proved to his satisfaction that 60 grams of protein daily is sufficient for a man weighing 154 pounds, or practically one-half of the previously-accepted standard.

To quote his words:

"These are perfectly trustworthy figures, with a reasonable margin of safety, and carrying perfect assurance of really being more than sufficient to meet the true wants of the body, adequate to supply all physiologic demands for reserve protein, and able to cope with the erratic requirements of personal idiosyncrasies."

The limits of this paper will not permit an analysis of Professor Chittenden's experiments, showing where fallacies may exist, or where conclusions are drawn on too meager evidence. He is a doughty antagonist, and one may well hesitate before "throwing his hat in the ring" with either him or the formerly obese Mr. Fletcher. They have made out a strong case, but not an impregnable one, and I humbly suggest that we pause and consider, before revising our whole dietetic system, not simply as expressed by the recent tariff tinkers in Congress, "revising it downward," but absolutely cutting it down to half.

That a large percentage of the American people eat too much is admitted that many, especially the well-to-do, ingest a surplus almost from the cradle to the grave cannot be gainsaid. The great multitude of middle-aged and old people, who constantly throng the doctors' offices and health resorts, seeking aid for overtaxed eliminative organs, mournfully attest to past gastronomic excesses; but that the American people, as a nation, consume too much protein food, or that our national virility is handicapped by gluttony, cannot be conceded by any student of present-day history.

Leaving for a time the discussion of this subject in its larger aspects, a common illustration of parsimony in nutrition is

the custom of some medical men of putting patients on dietaries without duly considering the caloric values contained therein. It would be thought careless indeed, should the physician not know, in prescribing atropin or strychnine, how much in the aggregate was being taken daily; yet it is just as irrational to expect an invalid to gain strength on a diet furnishing insufficient calories, as to expect physiologic effects from inadequate doses of drugs.

I have several times seen persons unwittingly starved to a dangerous degree, and in one instance a case came under observation in which the patient, while being treated for an acute disease, was really starved beyond the power of recuperation before his true condition was recognized.

The appetite of healthy individuals will generally prove a reliable index to bodily needs, but in digestive disorders accompanied by malnutrition it is not enough for the physicians to cut out offending articles of food; he should also see to it that sufficient calories are being furnished. Right here it is proper to sound a note of warning concerning the alcoholic proprietary foods on the market. As an auxiliary to other nourishment they have their place, and are not without value; but to give them in amounts large enough to meet ordinary caloric needs would result in continued alcoholic intoxication.

A few years ago, in New York City, I saw a genuine attack of delirium tremens complicate a case of typhoid fever, in which for two weeks the patient had been generously "supported" by a wellknown and popular proprietary food. In this connection I wish to commend the thorough and impartial work of the Council on Pharmacy and Chemistry of the American Medical Association, whose lucid reports have done much to dispel the glamour thrown about some of these alcoholic "supportives," and individually I desire to speed the Council in its meritorious labors.

The dry proprietary foods are equally unsatisfactory, because in adequate quantities they often disturb digestion more than the ordinary wholesome foods, while the caloric value claimed for them is unreasonable. Dr. Davis Edsall, of Philadelphia, recently weighed a specimen of these

dry foods, and reported that if all its weight were nutritive material, it was so light that it would take \$1.25 to \$1.50 to buy an amount equal in food value to a five-cent loaf of bread.

Some of the most graphic examples of parsimony in nutrition are exhibited by infants (not the chubby ones with roly-poly little bodies extolling the virtues of various brands) whose eager digestive organs are vainly attempting to glean sustenance from some of the infant foods on the market.

Dr. John Howland, of New York, in a late paper on proprietary and predigested foods, showed by calculation that two of the most representative and widely-used of these foods have little more than twice the value of whole milk, and that without the alcohol they would contain the same nourishment as milk. The dose of these foods advised for an infant of six months is a teaspoonful every four hours, which would give the munificent equivalent of two ounces of milk daily. Dr. Howland further says: "Assuming that such a food could be ingested without grave gastric, intestinal or other disturbance in sufficient quantity to nourish the six-months-old infant, it would cost about a dollar a day, and would, moreover, require the child to take in twenty-four hours alcohol equivalent to six ounces of brandy, enough to terminate his short life or keep him in a continuous state of alcoholic coma."

Another greatly overrated class of foods leading to parsimony in nutrition are the meat juices (not meat extracts) for which fabulous powers have been claimed. Well-expressed juice obtained from freshly chopped beef may contain a fair amount of actual nourishment in the form of coagulable proteins and meat bases, and is useful to tide over emergencies, or to satisfy the patient that he is being fed. It would take the stomach of a rhinoceros, however, to hold up under a continuous diet of meat juice for any length of time.

As to meat extracts, they are beyond parsimony—they are a delusion and a snare. To quote Dr. A. L. Benedict, of Buffalo: "A meat broth prepared at a temperature above 160 degrees F., the coagulation point of albumin, contains salts,

extractives, which are mainly excrementitious, and a little gelatin, as well as melted fat, though the last is often skimmed off. In so far as protein is concerned, a meat tea made by boiling cannot be more nourishing than egg tea, that is to say the water in which eggs are poached, or in plain words, it contains no protein nourishment at all, and is, barring certain qualitative and quantitative differences, of the same dietetic value as urine."

On such a regimen the patient may be fairly water-logged with soup, and still get less than a hundred calories daily.

It is of course wise to provide for economical use of the body fuel, just as engineers endeavor to get the most heat value from coal or wood burned in the furnaces of their engines. It is also well to minimize the surplus ashes of combustion in the body, as the engineer keeps his grates cleared of clinkers. There is, though, a point where economy ceases and parsimony begins, and there can certainly be no permanent healthy growth, nor can there be maintained a normal "moving equilibrium" in the bodies of individuals or nations, unless there is a liberal intake of protein food, for, as Rubner declares, "A large protein allowance is the right of civilized man."

Sir James Crichton-Browne tersely puts it thus: "The health and welfare of individuals and of peoples must depend on right methods of living, and of all methods of living the most momentous are those relating to the upkeep of the body by alimentation. It is food that supplies the material for that perpetual series of transformations in which life consists, and it must be adequate in quantity and suitable in quality, if these transformations are to proceed with that nicely balanced adjustment known as health . . . Nutrition is, therefore, an important branch of preventive medicine."

It may be confidently asserted that no physiologic alchemy nor mathematic legerdemain can ever hope to reduce materially the fixed demand for approximately 120 grams of protein daily for every active individual of average weight.

The late Dr. William Roberts once said:

"The generalized food customs of mankind are not to be viewed as random practices adopted to please the palate or gratify an idle or vicious appetite. These customs must be regarded as the outcome of profound instincts which correspond to certain wants of the human economy. They are the fruit of colossal experience accumulated by countless millions of men through successive generations. They have the same weight and significance as other kindred facts of natural history, and are fitted to yield to observation and study lessons of the highest scientific and practical value."

The foregoing thoughts, while possibly sounding in some respects an iconoclastic note, are thought worthy of consideration, and are respectfully submitted to the sober students of both individual and collective problems of nutrition.

TWIN PREGNANCY IN A DOUBLE UTERUS.*

J. G. Earnest, M.D., Atlanta.

On November 27, 1909, Dr. J. T. Henley of College Park, asked me to see Mrs. S. about thirty-five years old, and mother of three children. About a week before that date, she had a serious shock from an accident to one of her children at which time she ran about a hundred yards under great excitement. This brought on a miscarriage and Dr. Henley was called to see her. The whole mass was thrown off, consisting of a six or eight weeks foetus with the membranes. The doctor left supposing there would be no further trouble. Two or three days afterward, he was called back on account of pains and hemorrhage. He found the uterus open and empty. Lying to the left and posterior aspect of the uterus was a mass filling up that side of the pelvis. This he thought was an extra uterine pregnancy originating in the left tube when I examined the patient, my first impression was that his diagnosis was correct. The os uteri was so open that I had no difficulty in passing

*Read at meeting of Medical Association of Georgia, Augusta, April, 1912.

my finger to the fundus. It was entirely empty and moved freely in every direction. This perfect mobility aroused a suspicion in my mind as to the possibility of the large mass being an extra uterine pregnancy. If a tubal pregnancy from the size of the mass the tube must necessarily have ruptured some time before and in that event the uterus would have been immovably fixed by the resulting adhesions. In carefully examining the cervix I detected a depression just inside the os on the left side. While making this digital examination I felt a small clot of blood forced out of it. Taking my cue from this, I began trying to dilate the opening with my finger which proved to be an easy job and I soon succeeded in pushing my finger through and felt the head of a foetus in what was evidently the other part of a double uterus. The patient was chloroformed and the dilation completed, when I delivered a foetus of about six and a half months which lived twenty hours. It is probable that the three children had all been from the right side. There had been up to this time no suspicion of anything abnormal about her pelvic organs it seems. Ten months later she miscarried again throwing off a five months foetus.

I do not remember having seen any account of pregnancy existing in both sides of a double uterus at the same time. Another remarkable circumstance was that she could have been delivered three times at full term without the attendant finding out that there was something unusual about her case.

Dr. Henly had not attended her in any of her former labors and could give no particulars as to her previous history.

The more money The Journal of the Medical Association of Georgia makes out of its advertisements the less it costs the State Association to run the paper. This means that every member of the State Association has an interest in the advertising columns. If one business firm advertises and another does not, patronize the one that does. It is money in your pocket.

CYSTOSCOPY AS AN AID IN SURGICAL DIAGNOSIS.*

Wm. S. Goldsmith, M.D., Atlanta.

The development and perfection of various instruments of precision employed as diagnostic aids, and especially electric lighted instruments, has been of rapid growth. The necessity of a varied equipment in the laboratory and office of the present time and the training of the young physician is an indication that mere literary attainment is only a part of the accomplishment necessary for the diagnostician of today.

In no other field of endeavor can be seen a more earnest, studious, underpaid and perhaps unappreciated class of scientific workers as the average laboratory man. Who among us approaches the responsibility vested in him? Lives and happiness depend upon his report and decision many times.

The most expert pathologist is not infallible and this leads me to the declaration that the pathologist and clinician should, whenever possible, work in such intimate relationship that his acquaintance with clinical and physical conditions should harmonize with the purely technical picture as seen with the microscope. It would be unwise and unsafe for the busy clinician to try to perfect himself as a reliable pathologist as he may not have the taste or aptitude for such responsible work. He certainly does not possess the time to intelligently solve serious problems requiring years of training and experience.

I beg not to be understood as underrating the necessity for every student and physician to perfect himself as far as possible in pathology and its kindred branches. But, I again repeat that the busy physician has not the time, patience nor experience to do more than the simple laboratory work connected with his practice.

We now come to the more practical and less technical adjuncts for help in per-

*Read at meeting of Seventh District Medical Society, Marietta, 1913.

haps a limited field. The cystoscope, the endoscope and urethroscope are instruments which also require the training and experienced hand of operators skilled in their use. The ability to diagnose between normal and diseased structures is acquired by practice and instruction just the same as the cultivation of the ear to normal and abnormal chest sounds or the development of the sense of touch to that degree of exquisite sensibility that will enable us to explore regions of the body and correctly interpret our findings.

In selecting the cystoscope as a special instrument for consideration, I do so as a general surgeon and not as a genito-urinary specialist. I practice cystoscopy simply as a routine adjunct with other diagnostic agents and it is to the practical side of this question I wish to direct your attention.

As Guiteras says, "While cystoscopy is essentially a method of examining the bladder, it also shows the vesical aspect of the prostate and through the inspection of the ureteral orifices and the urine coming from the ureters, it aids in diagnosing diseases of the kidneys.

"It must always be borne in mind that the **object** of the **cystoscope** is to examine the bladder, and that it is not done for the purpose of catheterizing the ureters, unless clinical and urinary evidence points to ureteral or renal involvement."

The history of cystoscopy is interesting in that in 1805 Bossino of Frankfort, developed an instrument capable of producing a degree of illumination of the bladder. Similar efforts along this line in the years following showed little progress and it was not until 1876 that the master of modern cystoscopy, Neitze, invented the electric instrument which he presented a year later.

This original cystoscope was simplified in 1879 when the Edison incandescent lamp was used as the illuminating agent. Since the introduction of the incandescent light the instrument has been improved and many additional conveniences added to it. The principal accessories of the cystoscope, the ureteral catheters and various operating devices followed in 1892.

With these accessories, particularly the ureteral catheters, combined with the wonderful aid of immediate X-ray reproductions, a flood of intensely interesting and accurate information can be secured. Have we anything comparable in value as aids in diagnosis as the combination just mentioned?

Abnormal bladder symptoms arising from disease, various structural changes, reflex causes, fancied or real urinary ailments, can in a very large majority of cases be subjected to cystoscopic inspection. Practically all women and nearly every man, save those with urethral infections and strictures, can be safely and intelligently examined.

Foreign bodies, tumors, tubercular and malignant lesions, hemorrhage, intra-vesical prostatic conditions, abnormalities and various inflammatory conditions and ureteral abnormalities can, as a rule, be observed and valuable information gained in making a diagnosis and prognosis.

The beginner in this line of work is discouraged by reason of his inability to decide upon and select the instrument adapted to his needs. The frequent mistake is made in purchasing a cheap instrument and makeshift equipment, and this step is often fatal to his chances of ever successfully operating the cystoscope and it is abandoned with disgust and condemned in unmeasured terms because of gross ignorance and carelessness in its manipulation.

Again, the difficulty in securing the proper illumination is advanced as a further reason for the limited use of the cystoscope. An experience of several weeks of unremitting attention to this detail convinced me that the controllers sold for the purpose of modifying the electric street or house current was an uncertain and hazardous part of the equipment. The danger of shocking the patient and the annoyance and expense of burning out the tiny incandescent lamp is a handicap, discouraging to even an experienced operator. All of these disagreeable features can be overcome by using that ideal source of electric light for these instruments, the dry cell battery. A battery of four cells, easily carried in the instrument bag, or a six cell case for office use, and which can be

carried anywhere at any time and has been in my hands absolutely reliable, devoid of all danger of shocking the patient and giving a uniform and brilliant illumination. A patient ten miles in the country can be as easily examined at any hour as in your office or hospital.

There is also no real necessity for elaborate office equipment. A special table is not required. Indeed, I have cast aside a table bought for this particular use and am now using a plain pine table with foot supports, placing the patient flat upon the back with knees flexed and heels resting in the supports.

When examining women the vagina and vulva are washed with soap and water and mild mercurial solutions. A one-half grain tablet of cocaine is introduced in the meatus and urethra a short distance and allowed to dissolve, waiting at least five minutes before beginning instrumentation. I have observed that the majority of women will comfortably accommodate a No. 24 F. size, this being the average size of cystoscope. If the urethra is small I gradually dilate it with the ordinary steel sounds and the examination can then be effected with little pain.

In men it may be necessary occasionally to enlarge the meatus. If I find the meatus smaller than the No. 24 F. size it is also carefully dilated with sounds. One of the most ingenious instruments I have ever used is the Lewis depositor, a metal tube equipped with a staff with an acorn tip and this acts as the guide for the depositor. When the point reaches the prostatic urethra the staff is withdrawn and one or two one-half grain cocaine tablets are dropped in and pushed out of the tube in the urethra. The depositor is withdrawn and the tablets dissolve and produce a very satisfactory local anesthesia.

Alypin tablets of one or two grains are also used for the same purpose. Organic stricture of a calibre of No. 24 F. or No. 5 F. almost always offers a tedious resistance to this examination. However, a short preliminary treatment of the stricture and special effort looking to minimizing the local irritation will soon remove this difficulty.

Infection of the urethra, of either sex, particularly specific urethritis, is an unqualified bar to the examination.

In conclusion, my suggestion to the beginner is to purchase an indirect observation and double catheterizing cystoscope of American make and of the best quality; and a six cell dry battery of the portable type. The other necessary equipment as catheters, depositors, irrigators, etc., can be selected to suit the individual necessities of the operator.

I would especially commend for study Pilcher's Practical Cystoscopy and Guiteras' Urology.

REPORT OF A CASE OF SPLENO-MYELOGENOUS LEUKAEMIA WITH AN UNUSUALLY HIGH LEUCOCYTE COUNT.*

Will H. Malone, M.D., Marietta.

Our knowledge of Leukaemia as a distinct disease, began with the description of two cases by Cragie and Bennett in 1845. They thought the altered appearance of the blood due to puss, in fact a suppuration of the blood. A month later Virchow described a case in which the cell relation seemed to be reversed and attributed it to an increase in the colorless corpuscles. The following year he reviewed the cases that had been reported and proved beyond doubt that it was a pathological condition of the blood, giving it the name of Leukaemia.

While many cases of Leukamia have been reported, the leucocyte count has averaged about 350,000. Cases with a count over 1,000,000 are rare, the highest ever reported being 1,590,000. Thinking that a case with a count running constantly over 1,000,000 would be of interest I am led to report this one.

Case.

History. P. L., male, age 60, married, traveling salesman. His family history unimportant there being no record of specific or hereditary disease of either parent. He had no previous illness except re-

*Read at the meeting of the Seventh District Medical Society, March 12, 1913.

peated attacks of malaria during the last ten years most of which time he had been living in a malarial district. Has always been a large eater and has consumed large quantities of alcohol. His average weight has been about 225 pounds.

Symptoms. While he has always been a vigorous man, he began to notice signs of failing health more than a year and a half before coming under observation. First a prolonged attack of bronchitis from which he did not wholly recover his strength; then at intervals attacks of malaise and anorexia which soon passed off. These continued for about a year with a progressive loss in weight amounting to about 60 pounds. Then digestive disturbances appeared with alternating periods of diarrhoea and constipation. A gradual though progressive enlargement of the abdomen developed, being especially marked on the left side. This was accompanied by a sense of fullness which became worse as the disease progressed. He was troubled with frequent urination especially at night, and during the last few months of his illness marked dyspnoea appeared after the slightest exertion.

For several months prior to the time he came under observation, small masses or nodules would appear at intervals on all parts of his body. They were hard and tender at first, but would soon soften, assume a dark purple color, and be absorbed in ten days or two weeks. These were small Lymphomata and were due to the lymphocytic infiltration beneath the skin. About one month before being seen, he had a severe attack of paroxysmal pain on the left side. He was carried to a hospital and his condition diagnosed as renal colic, though the trouble was evidently located in the spleen.

He was only under treatment a little more than two months, and during the first few weeks his symptoms did not vary materially, though at times he appeared slightly improved. Later constant vertigo, with occasional attacks of nausea and vomiting developed; his hearing became defective and his eye sight very much impaired, and near the end the hemorrhages under the shin were very much increased.

Examination. After stripping the patient, on inspection the first thing noticed was the enormous enlargement of the abdomen. On palpation this was found to be an enlarged spleen extending to the symphysis pubis and about three inches across the median line of the abdomen. On the back, arms and chest there were about 15 to 20 small masses about one half inch across; these were the lymphocytic infiltrations before mentioned. Measuring the spleen as well as possible in the living subject, it was found to be 12 inches long and 10 inches broad.

His heart and lungs were negative though the apex beat was pushed up an interspace. The arteries were soft, pulse 76, blood pressure 150 mm., only slightly above normal for a man of his age and weight. There was no glandular enlargement in any portion of the body. Chemical examination of the urine showed a slight amount of albumin, and by the use of the microscope a few hyaline and granular casts were found.

Blood Examination. Thorough examination of the blood being the only way a positive diagnosis can be made of Leukaemia, there being several diseases having the same clinical symptoms, complete blood examinations were made for a number of weeks in this case. Each time as soon as the puncture was made, one could tell that there was a pathological condition of the blood present. The drop was slow in forming, thick, of a pale red color and seemed as though it had a pearl grey center.

The first leucocyte count was 1,650,000 to the cm. before the patient was put under treatment. Counts taken while under treatment were 1,350,000; 1,200,000; 1,190,000; with an average of 1,347,000.

The red cell count taken over the same length of time averaged 2,100,000. The hemoglobin was greatly reduced, being when the blood was first examined 42%. Poikilocytes were common, Megaloblasts rare, while a few Normoblasts were present.

The differential count was as follows:

Neutrophile Myelocyte.....	37%
Polymorpho-Nuclears	42%
Eosinophiles	8%

Small Mononuclears.....	7%
Large Mononuclears.....	2%
Basophile.....	4%

Diagnosis. From the great enlargement of the spleen, the enormous increase of the leucocytes with the Neutrophile Myelocyte predominating, and the absence of glandular enlargement, a diagnosis of Spleno Myelogenous Leukaemia was made.

Treatment. It may conservatively be stated that no absolute proof exists, that a case of Leukaemia has ever been permanently cured by any form of treatment. In the light of our present knowledge on the subject, the best we can do is to give the patient the greatest prolongation of life by proper dieting and attention to his general health.

The remedies and measures of treatment to be most relied on are—arsenic, iron, benzol and the x-ray. And of these radiation has possibly accomplished more than any other form of treatment.

This patient did not receive the x-ray treatment. He was ordered to suspend work and take moderate out door exercise. A light nutritious diet was given consisting mainly of milk. Arsenic and iron were also given in full doses, but while there was a gradual fall in the number of leucocytes the general condition of the patient did not improve.

As there has recently appeared in the literature on Leukaemia, several instances of favorable results in cases treated with Benzol, and as it had been experimentally proven that benzol first increased the production of leucocytes and then exerted a destructive action upon them while the number of reds were not affected and at the same time the spleen bone marrow and lymphatic apparatus showed marked aplasia. As this action is just what is needed in Leukaemia it was decided to administer it according to the method of Koranyi; which is with equal parts of olive oil a gram of the mixture to the capsule, from three to six times a day. This was given for about three weeks with marked improvement in the general condition of the patient. At this time the hemorrhages under the skin were increased and the

patient succumbed to heart failure. Unfortunately a blood count was not made after the benzol treatment was instituted.

WHY AMERICA HAS DUG THE PANAMA CANAL.

Why has America succeeded in building the Panama Canal, where France failed? Was it because we had more money, better men or better tools? No, it was because the French died so fast that they could not make any progress. The French, with an average force of 10,000 employees, lost from death during their construction period 22,000 men. We, with an average force of 33,000 men during about the same length of time, have lost from death 4,000. The French, with an average of 1,600 white employees, lost during their construction period from yellow fever 2,000 men. We, with an average of 5,000 white employees during the same length of time, have lost from yellow fever only eighteen. The important question, however, is the health of the American employees. During the year 1911 we had 10,489 American whites connected with the commission. Their death-rate from disease was 4.48 per thousand. Of these 10,489 Americans, 6,025 were men and 4,464 women and children. The death-rate from disease among the men was 2.82 per thousand. That among the women and children from the same cause was 6.72 per thousand. These facts are taken from a recent address, at Johns Hopkins University by Col. Wm. Gorgas, Chief Sanitary Officer of the Isthmian Canal Commission. His address appears in a recent issue of The Journal of the American Medical Association. Speak of the condition of the Americans now in the Canal Zone, Col. Gorgas says: "I think a still better way of satisfying oneself with regard to health conditions is direct observation of the American employees. They as a class are rugged and healthy-looking, of good color, and energetic and active in movement. They look more like the farmer and his family of the northwest than like people who have lived in the tropics for four or five years."

THE JOURNAL OF THE MEDICAL ASSOCIATION OF GEORGIA.

300-302-304 Harison Bldg.

SUBSCRIPTION

PRICE.....ONE DOLLAR PER YEAR

SINGLE COPIES of this calendar year, 15 cents; of the previous calendar year, also 15 cents; two years old, 20 cents; three years old, 25 cents; in other words, 5 cents additional is charged for each year preceding the last calendar year.

REMITTANCES should be made by check, draft, registered letter, money or express order. Currency should not be sent unless the letter is registered. Stamp in amounts under one dollar are acceptable.

CHANGE OF ADDRESS notice should give both the old and the new address, and state whether the change is permanent or temporary. The change notice must reach us ten days in advance of the date of the issue which is to be forwarded to the new address.

WARNING: Pay no money to an agent unless he presents a letter showing authority for making collection.

ADVERTISEMENTS

Advertising forms go to press eight days in advance of the date of issue. In sending in copy time must be allowed for setting up advertisements and for sending proofs. No proprietary medicines can be advertised until approved by the Council. Advertising rates will be sent on request.

CONTRIBUTIONS

EXCLUSIVE PUBLICATION: Articles are accepted for publication on condition that they are contributed solely to this journal.

CONTRIBUTIONS TYPEWRITTEN. Authors should have their contributions typewritten—double-space and with ample margin—before submitting them. The expense is small to the author—the satisfaction is great to the editor and printer. We cannot promise to return unused manuscript, but try to do so in every instance. Manuscript should not be rolled or folded.

ILLUSTRATIONS: Half-tones and zinc etchings will be furnished by THE JOURNAL when satisfactory photographs or drawings are supplied by the author. Each illustration, table, etc., should bear the author's name on the back. Photographs should be clear and distinct; drawings should be made in black ink on white paper. While we cannot guarantee to return used photographs and drawings, we use our best endeavors to do so after the article is published, if the word "return" is written on the back of each.

ANONYMOUS CONTRIBUTIONS, whether for publication, for information, or in the way of criticism are consigned to the wastebasket unread.

NEWS: Our readers are requested to send us items of news of a medical nature, also marked copies of local newspapers containing matters of interest to physicians. We shall be glad to know the name of the sender in every instance.

THE SCIENTIFIC PROGRAM FOR THE SAVANNAH MEETING.

The Committee on Scientific Work found that it had ninety-five papers to be presented at the Annual Meeting in addition to one or more addresses. For that reason the members decided it was imperative to divide the work into two sections, as it would be manifestly impossible to complete such a program in one section and it would be unfair to those members whose papers appear in the latter part of the Program. The papers will be called for at the time designated

in the Program published below and it is hoped thereby that no delay will be occasioned and that every man may have an opportunity to read his paper during the day in which it has been assigned. A complete Program will be mailed to every member within a few days. The Committee will submit this Program to the House of Delegates and if adopted it will be made the regular order of business. If not adopted the papers will be taken alternately from the Medical and the Surgical Sections.

The order of business in condensed form will be as follows:

Wednesday Morning—General Session.
Wednesday Afternoon—Medical Section.
Wednesday Afternoon—Surgical Section.
Wednesday Evening—Informal Smoker.
Thursday Morning—Medical Section.
Thursday Morning—Eye, Ear and Throat Section.
Thursday Afternoon—Surgical Section.
Thursday Afternoon—Pediatric Section.
Thursday Evening—Oyster Roast.
Friday Morning—General Session and reading of papers not reached at previous sessions.
Friday Afternoon—Business Session.

GENERAL SESSION.

Wednesday—Morning Session

1—A Discussion of Medical and Pharmaceutical Practices and the Problems involved in Georgia.

Robert C. Wilson, Ph.G., Athens,
Prof. of Pharmacy, U. of Ga.

2—Sterilization of Confirmed Criminals, Idiots and Rapists.

W. L. Champion, M.D., Atlanta

3—Segregation Versus Sterilization of Defectives.

T. R. Wright, M.D., Augusta

4—The Physician, His Duties and Obligations.

R. B. Barron, M.D., Gray

5—The Lawyer and His Pauper Client: The Doctor and His Charity Patient.

J. G. Dean, M.D., Dawson

6—The Value of Tuberculin Tested Cattle in the Milk Supply of a City.
Claude A. Smith, M.D., Atlanta

7—Rabies: Pastuer Treatment of.
C. D. Greer, M.D., Atlanta

SECTION IN MEDICINE.

Wednesday—Afternoon Session

1—Some Facts Concerning the Etiology of Insanity, Based on a Study of the Admissions to the Georgia State Sanitarium During the Year 1912.
R. C. Swint, M.D., Milledgeville

2—Treatment of Chorea with Rheumatism Phylacogen..
E. Bates Block, M.D., Atlanta

3—The Criminal Insane.
E. M. Green, M.D., Milledgeville

4—The Freudian Treatment of Psychoneuroses.
Hansell Crenshaw, M.D., Atlanta

5—A Plea for Psychopathic Hospitals and Wards.
Y. H. Yarbrough, M.D. Milledgeville

6—Salvarsan in the Treatment of Syphilis and Para-syphilis of the Nervous System.
Jas. N. Brawner, M.D. Atlanta

7—Paramyoclonus Multiplex. with Report of a Case.
Thos. S. Clay, M.D., Savannah

8—A Plea for the Medical Inspection of our Country Schools.
L. C. Allen, M.D., Hosehton

9—Most Prevalent Intestinal Parasites Found in Georgia.
A. G. Fort, M.D., Atlanta

10—Health Conditions as They Exist in Most South Georgia Municipalities.
Arthur D. Little, M.D., Thomasville

11—Milk as a Carrier of Disease Germs.
S. L. Vinson, M.D., Nicholls

12—Cardio Vascular Renal Disease with Cases Illustration Chief Factors.
S. R. Roberts, M.D., Atlanta

13—Treatment of Pneumonia.
J. W. Palmer, M.D., Ailey

14—Syphilis from the Standpoint of the Physician.
Cosby Swanson, M.D., Atlanta

15—Chronic Interstitial Nephritis.
W. B. Hardman, M.D., Commerce

16—Chronic Nephritis; Dietetics and Treatment.
R. F. Wheat, M.D., Amsterdam

17—Eclampsia.
H. W. Birdsong, M.D., Ashland

SECTION IN SURGERY.

Wednesday—Afternoon Session

1—Appendicitis Without Appendiceal Symptoms.
R. M. Harbin, M.D., Rome

2—Contractures of the Psoas Parvus Muscle Simulating Appendicitis.
Geo. R. White, M.D., Savannah

3—Diagnosis of Appendicitis and When to Operate.
L. C. Fisher, M.D., Atlanta

4—Some Observations on Post Operative Ileus.
W. L. Cooke, M.D., Columbus

5—Surgical Pathology of the Liver.
Everard A. Wilcox, M.D., Augusta

6—The Present Status of Gall Bladder Surgery.
R. R. Kime, M.D., Atlanta

7—Report of Two Surgical Cases. (1) Intestinal Perforation, (2) Double Incision of Gall Bladder and Removal of Stone.
M. F. Carson, M.D., Griffin

8—A Report of Caesarean Sections Done During the Past Year.
E. C. Davis, M.D., Atlanta

9—Caeserean Section with Report of Case.
S. T. Barnett, M.D., Atlanta

- 10—Surgery Among Insane Females—Report of Cases.
Y. A. Little, M.D., Milledgeville
- 11—Cancer Uteri, Hysterectomy, Return, Cure—Two Cases.
E. C. Cartledge, M.D., Atlanta
- 12—Imperfect Development a Factor in Genesis of Diseases of Women.
Baxter S. Moore, M.D., Atlanta
- 13—Some Gynecological Disorders Dependent Upon General, Rather than Local Causes.
J. R. B. Branch, M.D., Macon
- 14—Immediate Repair of Lacerations of the Perineum with Report of Cases.
J. L. Campbell, M.D., Atlanta
- 15—Puerperal Infection: Its Cause and Treatment.
J. D. Chason, M.D., Bainbridge
- 16—A Few Remarks on Uterine Prolapse.
H. R. Donaldson, M.D., Atlanta
- 17—The Abuse of Purgatives Following Abdominal Operations.
H. Stokes Munroe, M.D., Columbus
- 24—The Alimentary Tract the Portal of Entrance to Tubercle Bacilli.
E. C. Thrash, M.D., Atlanta
- 25—Chronic Constipation of Women: Sequela and Medical Treatment.
R. H. Jenkins, M.D., Hogansville
- 26—Stock Vaccines versus Autogenous Vaccines.
C. W. Gould, M.D., Atlanta
- 27—The Use of Bacterial Vaccines in the Treatment of Acute and Chronic Infections with Report of Results.
Lewis M. Gaines, M.D., Atlanta
- 28—A Preliminary Report on the Use of Sodium Cacodylate in the Treatment of Malaria.
E. E. Murphey, M.D., Augusta
- 29—A Review of Three Thousand Cases of Fever Under the Salicylate of Soda Treatment.
B. P. Oliveros, M.D., Savannah
- 30—About Drugs: Desirability of Knowledge in Using and of Simplicity in Prescribing.
R. H. Stovall, M.D., Macon
- 31—The Use of Medicine Hypodermically.
C. M. Curtis, M.D., College Park

SECTION IN MEDICINE.

Thursday—Morning Session

- 18—Pituitrin.
Marion T. Benson, M.D., Atlanta
- 19—Long Continued Rest in the Treatment of Brights Disease.
H. F. Harris, M.D., Atlanta
- 20—Treatment of Typhoid Hemorrhage.
Thos. D. Coleman, M.D., Augusta
- 21—Central Cirrhosis of the Liver.
V. H. Bassett, M.D., Savannah
- 22—The Pros and Cons of Duodenal Alimentation.
Geo. M. Niles, M.D., Atlanta
- 23—Duodenal Ulcer; Diagnosis and Treatment.
W. R. Houston, M.D., Augusta

- 32—Haematuria.
W. B. Crawford, M.D., Savannah
- 33—Haemoglobinuric Fever.
L. B. Royal, M.D., Girard

SECTION IN SURGERY.

Thursday—Afternoon Session

- 18—Practical Anesthesia.
Chas. Usher, M.D., Savannah
- 19—Local Anesthetics with Special Reference to Novocaine.
W. S. Goldsmith, M. D., Atlanta
- 20—Treatment of Cerebrospinal Meningitis by Drainage of the Lateral Ventricle.
R. V. Martin, M.D., Savannah
- 21—Report of a Few Cases of Transfusion.
C. C. Harrold, M.D., Macon

22—Post Operative Hemorrhage and Surgical Shock.

W. W. Battey, Jr., M.D., Augusta

23—An Improved Method of Hemostasis in Shoulder and Hip Joint Amputations.

W. A. Norton, M.D., Savannah

24—A Case of Large Inguinal Aneurysm Cured by Simple Transperitoneal Ligation of the External Iliac Artery.

E. R. Corson, M.D., Savannah

25—The Symptoms of Goiter.

E. G. Jones, M.D., Atlanta

26—Tumors of the Carotid Body.

John Funke, M.D., Atlanta

27—The Interpretation of the Wassermann Reaction.

E. G. Ballenger, M.D., Atlanta

28—Movable Kidney.

W. F. Shallenberger, M.D., Atlanta

29—Is Floating Kidney a Surgical Disease?

Wm. Perrin Nicholson, M.D., Atlanta

30—Vesical Calculi with Report of an Interesting Case.

Willis Jones, M. D., Atlanta

31—Bladder Disturbances Consequent upon Infections of the Urethra and Prostate.

Asbury Hull, M.D., Augusta

32—Extra Vesical Causes of Bladder Disturbances.

C. I. Bryans, M.D., Augusta

33—Prostatitis.

Montague Boyd, M.D., Atlanta

34—Acute Osteo-myelitis: The Importance of Early Diagnosis and Treatment.

F. K. Boland, M.D., Atlanta

35—Tuberculosis of the Spine.

C. R. Andrews, M.D., Atlanta

36—Some Observations on Bone Grafts in Spinal Tuberculosis.

H. M. Michel, M.D., Augusta

SECTION ON OPHTHALMOLOGY, OTOLGY AND LARYNGOLOGY.

Thursday—Morning Session

1—Optic Atrophy, Caused by Uterine Hemorrhage.

F. P. Calhoun, M.D., Atlanta

2—The Treatment of Trachoma from a Surgical Standpoint.

St. J. R. de Caradenc, M.D., Savannah

3—The Saemisch Section.

A. W. Stirling, M.D., Atlanta

4—Cataracts: Operation and After Treatment.

J. M. Hull, M.D., Augusta

5—The Care of the Eyes of Children While Employed Indoors.

Hugh M. Lokey, M.D., Atlanta

6—Raynauds Disease: A Report of Three Cases in the Colored Race.

Lawrence Lee, M.D., Savannah

7—What the General Practitioner Should Know About Ophthalmology.

Cecil Stockard, M.D., Atlanta

8—Chronic Suppuration of the Middle Ear; the Radical Operation for its Cure; and a Report of Case.

F. M. Cunningham, M.D., Macon

9—Some of the Newer and More Rational Methods of Treating Aural Diseases.

Dunbar Roy, M.D., Atlanta

10—The Significance of Earache in Children and Surgical Measures for its Relief.

M. M. Stapler, M.D., Macon

11—Further Experience with a Method for Prevention of Perforation in Submucous Resection.

Richard M. Nelson, M.D., Atlanta

12—Some Observations on Tonsil and Adenoid Operations.

W. C. Kellogg, M.D., Augusta

13—The Offending Tonsil.

W. C. Lyle, M.D., Augusta

SECTION ON PEDIATRICS.

Thursday—Afternoon Session

- 1—Infant Feeding Simplified.
W. A. Mulherin, M.D., Augusta
- 2—A Better Way of Putting a Diaper on a Baby.
S. A. Visanska, M.D., Atlanta
- 3—The Care of the New Born.
M. A. Clark, M.D., Macon
- 4—A Plea for More Interest in Pediatrics.
C. A. Rhodes, M.D., Atlanta
- 5—Infant Mortality.
Noel M. Moore, M.D., Augusta
- 6—Intubation in Diphtheria.
W. N. Adkins, M.D., Atlanta
- 7—The Clinical Significance of the Infant's Stool.
Herman W. Hesse, M.D., Savannah
- 8—Cholera Infantum.
S. A. V. Christiphine, M.D., Attapulgis

GENERAL SESSION.

Friday—Morning Session

- 1—Reading of papers not read at previous sessions.
- 2—President's Address.
- 3—The Problem of the Social Evil considered in its Social and Medical Aspects and in its Relation to Race Bet-terment.
J. Ewing Mears, M.D., Philadelphia,
Honorary Member, Ga. Medical Society.
- 4—Unfinished Business.

GENERAL SESSION.

Friday—Afternoon Session

- 1—Election of Officers.
- 2—Organization of Council.

Are you, as a member of the Medical Association of Georgia, doing all you can to further the interests of the organiza-tion?

CONSTITUTION AND BY-LAWS of the MEDICAL ASSOCIATION OF GEORGIA

Constitution

ARTICLE I—NAME OF THE ASSOCIATION

The name and title of this organization shall be the Medical Association of Georgia.

ARTICLE II—PURPOSES OF THE ASSOCIA-TION

The purpose of this Association shall be to fed-erate and bring into one compact organization the entire medical profession of the State of Georgia; to extend medical knowledge and ad-vance medical science; to elevate the standard of medical education, and to secure the enact-ment and enforcement of just medical laws; to promote friendly intercourse among physicians; to guard and foster the material interests of its members and to protect them against imposition; and to enlighten and direct public opinion in regard to the great problems of State medicine, so that the profession shall become more capable and honorable within itself, and more useful to the public, in the prevention and cure of disease, and in prolonging and adding comfort to life.

ARTICLE III—COMPONENT SOCIETIES

Component Societies shall consist of those county medical societies which hold charters from this Association.

ARTICLE IV—COMPOSITION OF THE ASSO-CIATION

Section 1. This Association shall consist of members and delegates.

Sec. 2. Members: The members of this As-sociation shall be the members of the component county medical societies, to which only white physicians shall be eligible.

Sec. 3. Delegates: Delegates shall be those members who are elected in accordance with this constitution and by-laws to represent their re-spective component societies in the House of Delegates of this Association.

ARTICLE V—HOUSE OF DELEGATES

The House of Delegates shall be the business body of the Association, and shall consist of (1) Delegates elected by the component county so-cieties; (2) the Councilors, and (3) ex-officio, the President and Secretary of this Association.

ARTICLE VI—COUNCIL

The Council shall consist of the Councilors, and the President and Secretary, ex-officio. Be-sides its duties mentioned in the by-laws, it shall constitute the Finance Committee of the House of Delegates. Five Councilors shall constitute a quorum.

ARTICLE VII—SECTIONS AND DISTRICT SOCIETIES

The House of Delegates may provide for a di-vision of the scientific work of the Association into appropriate sections, and for the organiza-tion of such Councilor District Societies, as will

promote the best interests of the profession, such societies to be composed exclusively of members of component societies.

ARTICLE VIII—SESSIONS AND MEETINGS

The annual meetings shall take place on the third Wednesday in April, and at such place as shall be designated by the Association.

ARTICLE IX—OFFICERS

Section 1. The officers of this Association shall be a President, two Vice-Presidents, a Secretary-Treasurer, and twelve Councilors, one from each congressional district.

Sec. 2. The officers, except the Secretary-Treasurer and councilors, shall be elected annually. The terms of the Councilors shall be for three years, those first elected serving one, two and three years, as may be arranged, viz: the Councilors for the first, second, third and fourth districts for three years; those for the fifth, sixth, seventh and eighth for two years; those for the ninth, tenth and eleventh for one year. The Secretary-Treasurer shall be elected for a term of five years. All these officers shall serve until their successors are elected and installed.

Sec. 3. The officers of this Association shall be elected by the Association by ballot, and without nomination at 3 o'clock on the third day of the annual session, (Amendment proposed 1912.) If there is no election on the first ballot, the three names receiving the highest number of ballots shall be voted on, the other names being dropped. If there is no election on second ballot, the two names receiving the highest number of ballots shall be voted on until election occurs. Delegates to the American Medical Association shall be elected at same time and in same manner.

ARTICLE X—FUNDS AND EXPENSES

Funds shall be raised by an equal per capita assessment on each component society. The amount of the assessment shall not exceed the sum of \$3.00 per capita per annum. Funds may be appropriated by the House of Delegates to defray the expenses of the Association, for publications, and for such other purposes as will promote the welfare of the profession. All resolutions appropriating funds must be referred to the finance committee before action is taken thereon.

ARTICLE XI—RATIFICATION

The House of Delegates shall submit all questions before it to the Association for ratification.

ARTICLE XII—THE SEAL

The Association shall have a common seal, with power to break, change or renew the same at pleasure.

ARTICLE XIII—AMENDMENTS

Any amendment that may be offered to the Constitution shall lie over until the next annual meeting; and for its adoption at such meeting shall require a two-thirds vote of all present and voting.

BY-LAWS

CHAPTER I—MEMBERSHIP

Section 1. The name of a physician on the properly certified roster of members of a component society, which has paid its annual assessment, shall be *prima facie* evidence of membership in this Association.

Sec. 2. Any person who is under sentence of suspension or expulsion from a component society or whose name has been dropped from its roll of members, shall not be entitled to any of the rights or benefits of this Association, nor shall he be permitted to take part in any of its proceedings until he has been relieved of such disability.

Sec. 3. Each member in attendance at the annual session shall enter his name on the registration book, indicating the component society of which he is a member. When his right to membership has been verified by reference to the roster of his society, he shall receive a badge which shall be evidence of his right to all the privileges of membership at that session. No member shall take part in any of the proceedings of an annual session until he has complied with the provisions of this section.

CHAPTER II—GENERAL MEETINGS

Section 1. All registered members may attend and participate in the proceedings and discussions of the general meetings. The general meetings shall be presided over by the President, or by one of the Vice-Presidents.

CHAPTER III—HOUSE OF DELEGATES

Section 1. The House of Delegates shall meet at 9 a. m. on the first day of the annual session. It may adjourn from time to time as may be necessary to complete its business; provided, that its hours shall conflict as little as possible with the general meetings. The order of business shall be arranged as a separate section of the program.

Sec. 2. Each component county society shall be entitled to send to the House of Delegates each year one delegate for every fifty members, and one for each fraction thereof, but each component society which has made its annual report and paid its assessment as provided in this Constitution and By-Laws shall be entitled to one delegate. Should the regular delegate from any county not be present at the meeting, the President shall appoint a substitute from that county to act.

Sec. 3. A majority of delegates present shall constitute a quorum.

Sec. 4. It shall, through its officers, council and otherwise, give diligent attention to and foster the scientific work and spirit of the Association, and shall constantly study and strive to make each annual session a stepping-stone to future ones of higher interest.

Sec. 5. It shall consider and advise as to the material interests of the profession, and of the public in those important matters wherein it is dependent on the profession, and shall use its influence to secure and enforce all proper medical and public health legislation, and to diffuse popular information in relation thereto.

Sec. 6. It shall make careful inquiry into the condition of the profession of each county in

the State, and shall have authority to adopt such methods as may be deemed most efficient for building up and increasing the interest in such county societies as already exist, and for organizing the profession in counties where societies do not exist. It shall especially and systematically endeavor to promote friendly intercourse among physicians of the same locality, and shall continue these efforts until every physician in every county of the State who can be made reputable has been brought under medical society influence.

Sec. 7. It shall encourage post-graduate and research work as well as home study, and shall endeavor to have the results utilized and intelligently discussed in the county societies.

Sec. 8. It shall divide the State into councilor districts, one for each congressional district, and, when the best interest of the Association and profession will be promoted thereby, organize in each a district medical society, and all members of component county societies and no others shall be members in such district societies.

Sec. 9. It shall have authority to appoint committees for special purposes from among members of the Association who are not members of the House of Delegates. Such committees shall report to the House of Delegates and may be present and participate in the debate thereon.

CHAPTER IV—DUTIES OF OFFICERS

Section I. The President shall preside at all meetings of the Association and of the House of Delegates; shall appoint all committees not otherwise provided for, and shall perform such other duties as custom and parliamentary usage may require. He shall be the real head of the profession of the State during his term of office, and as far as practicable, shall visit, by appointment, the various sections of the State and assist the Councilors in building up the county societies, and in making their work more practical and useful.

Sec. 2. The Vice-President shall assist the President in the discharge of his duties. In the event of the President's death, resignation, or removal, the Vice-Presidents, in their order, shall succeed him.

Sec. 3. The Secretary-Treasurer shall give bond in the sum of \$1,000. He shall demand and receive all funds due the Association, together with the bequests and donations. He shall pay money out of the treasury only on a written order of the President.

Sec. 4. The Secretary-Treasurer shall attend the general meetings of the Association and the meetings of the House of Delegates, and shall keep the minutes of their respective proceedings in separate record books. He shall be ex-officio Secretary of the Council. He shall be custodian of all record-books and papers belonging to the Association. He shall provide for the registration of the members and delegates at the annual session. He shall with the co-operating of the secretaries of the component societies, keep a card-index register of all the legal practitioners of the State by counties, noting on each his status in relation to his county society, and on request, shall transmit a copy of this list to the American Medical Association. He shall aid the Councilors in the organization and improvement of the county societies in the exten-

sion of the power and usefulness of this Association. He shall conduct the official correspondence, notifying members of meetings, officers of their election, and committees of their appointment and duties. He shall employ such assistants as may be ordered by the House of Delegates with the approval of the Association, and shall make an annual report to the Association. He shall supply each component society with the necessary blanks for making their annual reports; shall keep an account with the component societies, charging against each society its assessment and collect the same. Acting with the committee on scientific work, he shall prepare and issue all programs. The amount of his salary shall be fixed by the Association. He shall be editor of the Journal of the Medical Association of Georgia. He shall employ such assistants as may be ordered by the Council or the House of Delegates. He shall annually make a report of his doings to the House of Delegates.

He shall furnish a balance sheet at each annual meeting for the past fiscal year to be published in the Journal. This shall consist of an itemized statement of all financial transactions of the past year, all accounts made, money received and from whom, and all moneys disbursed, to whom, and for what purpose, with vouchers attached. (A fiscal year includes the period of time between the first day of April and the last of March.)

CHAPTER V—COUNCIL

Section 1. The Council shall meet on the day preceding the annual session and daily during the session, and at such other times as necessity may require, subject to the approval of the President. It shall meet on the last day of the annual session of the Association to organize and outline work for the ensuing year. It shall elect a chairman and clerk, who, in the absence of the Secretary of the Association, shall keep a record of its proceedings. It shall, through its chairman, make an annual report to the House of Delegates.

Sec. 2. Each Councilor shall be organizer and peacemaker for his district. He shall visit each county in his district at least once a year for the purpose of organizing component societies where none exist, for inquiring into the condition of the profession, and for improving and increasing the zeal of the county societies and their members. He shall make an annual report of his work, and of the condition of the profession of each county in his district at the annual session of the House of Delegates. The necessary traveling expenses incurred by such Councilor in the line of the duties herein imposed may be allowed by the House of Delegates on a proper itemized statement, but this shall not be construed to include his expense in attending the annual session of the Association.

Sec. 3. The Council shall be the board of censors of the Association. It shall consider all questions involving the right and standing of members, whether in relation to other members, to the component societies, or to this Association. All questions of an ethical nature brought before the House of Delegates or the general meeting shall be referred to the Council without discussion. It shall hear and decide all questions of discipline affecting the conduct of members or of a component society, on which an

appeal is taken from the decision of an individual Councilor, and its decision in all such matters shall be final, when ratified by the Association.

Sec. 4. In sparsely settled sections it shall have authority to organize the physicians of two or more counties into societies, to be suitably designated so as to distinguish them from district societies, and these societies, when organized and chartered, shall be entitled to all rights and privileges provided for component societies until such counties shall be organized separately.

Sec. 5. The Council shall provide for and superintend the publication and distribution of all proceedings, transactions and memoirs of the Association, and shall have authority to appoint such assistants to the editor as it deems necessary. It shall manage and conduct the Journal of the Medical Association of Georgia, which is the organ of the Association, and all money paid into the treasury as dues shall be received as subscriptions to the Journal.

All money received by the Council and its agents, resulting from the discharge of the duties assigned to them, must be paid to the Secretary-Treasurer of the Association. As the Finance Committee it shall annually audit the accounts of the Secretary-Treasurer and other agents of this Association, and present a statement of the same in its annual report to the House of Delegates, which report shall also specify the character and cost of all the publications of the Association during the year, and the amount of all other property belonging to the Association under its control, with such suggestions as it may deem necessary. In the event of a vacancy in any office, the Council shall fill the vacancy until the next annual election.

Sec. 6. All reports on scientific subjects and all scientific discussions and papers heard before the Association, shall be referred to the Journal of the Medical Association of Georgia for publication. The editor, with the consent of the Councilor for the district in which he resides may curtail or abstract papers or discussions, and the Council may return any paper to its author which it may not consider suitable for publication.

Sec. 7. All commercial exhibits during the annual sessions shall be within the control and direction of the Council.

Sec. 8. Any member of the Council who fails to attend two regular successive sessions of the Council, or whose district does not show evidences of the performance of his duties during the year, unless he renders an acceptable excuse to the Council, his position shall be declared vacant by the President and his successor appointed by the President.

Sec. 9. In the absence of a Councilor the President is empowered to appoint a representative from the District as acting Councilor.

Sec. 10. Each Councilor shall render at every session a written report of each county in his district.

CHAPTER VI—COMMITTEES

Section 1. The standing committees shall be as follows:

A Committee on Scientific Work.

A Committee on Public Policy and Legislation.

A Committee on Arrangements, and such other committees as may be necessary.

Sec. 2. The Committee on Scientific Work shall consist of three members, of which the Secretary-Treasurer shall be one, and shall determine the character and scope of the scientific proceedings of the Association for each session. Thirty days previous to each annual session it shall prepare and issue a program announcing the order in which papers, discussions and other business shall be presented.

Sec. 3. The Committee on Public Policy and Legislation shall consist of three members and the President and Secretary. Under the direction of the House of Delegates it shall represent the Association in securing and enforcing legislation in the interest of public health and of scientific medicine. It shall keep in touch with professional and public opinion, shall endeavor to shape legislation so as to secure the best results for the whole people, and shall strive to organize professional influence so as to promote the general good of the community in local, State and National affairs and elections.

Sec. 4. The Committee on Arrangements shall be appointed by the component society in which the annual session is to be held. It shall provide suitable accommodations for the meeting places of the Association and of the House of Delegates, and of their respective committees, and shall have general charge of all arrangements. Its chairman shall report an outline of the arrangements to the Secretary-Treasurer for publication in the program, and shall make additional announcements during the session as occasion may require.

CHAPTER VII—COUNTY SOCIETIES

Section 1. All county societies now in affiliation with this Association, or those which may hereafter be organized in the State, which have adopted principles of organization not in conflict with this Constitution and By-Laws, shall on application, receive a charter from and become a component part of this Association.

Sec. 2. As rapidly as can be done after the adoption of this Constitution and By-Laws, a medical society shall be organized in every county in the State in which no component society exists, and charters shall be issued thereto.

Sec. 3. Charters shall be issued only on approval of the Council, and shall be signed by the President and Secretary of this Association. The Association shall have authority to revoke the charter of any component society whose actions are in conflict with the letter or spirit of this Constitution and By-Laws.

Sec. 4. Only one component medical society shall be chartered in any county.

Sec. 5. Each county society shall judge of the qualifications of its own members, but, as such societies are the only portals to this Association, every reputable and legally registered white physician who does not practice or claim to practice, nor lend his support to any exclusive system of medicine, shall be eligible to membership. Before a charter is issued to any county society, full and ample notice and opportunity shall be given to every such physician in the county to become a member.

Sec. 6. Any physician who may feel aggrieved by the action of the society of his county in refusing him membership, or in suspending or

expelling him, shall have the right to appeal to the Council, and its decision shall be final, when ratified by the Association.

Sec. 7. In hearing appeals the Council may admit oral or written evidence, as in its judgment will best and most fairly present the facts, but in case of every appeal, both as a board and as individual Councilors in district and county work, efforts at conciliation and compromise shall precede all such hearings.

Sec. 8. When a member in good standing in a component society moves to another county in this State, his name, on request, shall be transferred, without cost, to the roster of the county society into whose jurisdiction he moves.

Sec. 9. A physician living on or near a county line may hold his membership in that county most convenient for him to attend, on permission of the component society in whose jurisdiction he resides.

Sec. 10. Each component society shall have general direction of the affairs of the profession in its county, and its influence shall be constantly exerted for bettering the scientific, moral and material condition of every physician in the county; and systematic efforts shall be made by each member, and by the society as a whole, to increase the membership until it embraces every qualified physician in the county.

Sec. 11. At some meeting in advance of the annual session of this Association, each county society shall elect a delegate or delegates to represent it in the House of Delegates of this Association, in the proportion of one delegate to each fifty members, or fraction thereof, and the secretary of the society shall send a list of such delegates to the Secretary of this Association at least ten days before the annual session.

Sec. 12. The secretary of each component society shall keep a roster of its members, and of the non-affiliated registered physicians of the county, in which shall be shown the full name, address, college and date of graduation, date of license to practice in this State, and such other information as may be deemed necessary. In keeping such roster the secretary shall note any changes in the personnel of the profession by death, or by removal to or from the county, and in making his annual report he shall be certain to account for every physician who has lived in the county during the year.

Sec. 13. The secretary of each component society shall forward its assessment, together with its roster of officers and members, list of delegates, and list of non-affiliated physicians of the county to the Secretary of this Association each year, thirty days before the annual session.

Sec. 14. Any county society which fails to pay its assessment, or make the report required, on or before April 1 of each year, shall be held as suspended, and none of its members or delegates shall be permitted to participate in any of the business or proceedings of the Association, or of the House of Delegates, until such requirement has been met.

Sec. 15. The Secretary of each county society shall report to the Journal of the Medical Association of Georgia full minutes of each meeting and forward to it all scientific papers and discussions which the society shall consider worthy of publication.

CHAPTER VIII—MISCELLANEOUS

Section 1. No address or paper before the Association shall occupy more than fifteen minutes in its delivery; and no member shall speak longer than five minutes, nor more than once on any subject, except by unanimous consent.

Sec. 2. All papers read before the Association, or any of the sections, shall become its property. Each paper shall be deposited with the Secretary when read.

Sec. 3. The deliberations of this Association shall be governed by parliamentary usage as contained in Robert's Rules of Order, when not in conflict with this Constitution and By-Laws.

CHAPTER IX—AMENDMENTS

These By-Laws may be amended at any annual session by a majority vote of the Association, after the amendment has laid on the table for one day.

GEORGIA ASSOCIATION OF STATE AND MUNICIPAL HEALTH OFFICIALS.

The Annual Meeting of State and Municipal Health Officials of Georgia will be held in the City Hall, Savannah, Ga., on April 15, 1913, 10 A. M.

Members and Officers of the State Board of Health will be present. It is desired to have in attendance one or more representatives from each City and County Board of Health. Physicians and others interested in Public Health are invited to attend.

A good program is assured. Dr. Hiram Byrd, Assistant State Health Officer of Florida, has been invited to address the Conference, and will speak on the subject:

Leprosy.

Papers on the following subjects have been promised:—Cerebrospinal Meningitis; Food Inspection; Food Analysis; Milk Analysis; Medical School Inspection; Animal Parasites; Prophylaxis of Malaria; Diagnosis of Diphtheria; Disposal of Municipal Waste, etc., etc.

The program is not yet complete. Send titles of papers to the undersigned. You are urged to attend and present a paper.

E. E. MURPHEY, M.D., President,

Augusta, Ga.

A. V. WOOD, Secretary,

Brunswick, Ga.

V. H. BASSETT, M.D., Savannah, Ga.,

Committee on Arrangements.

VOLUME INDEX

AUTHORS

A		K	
	PAGE		PAGE
Anderson, J. M.....	121	Kershaw, T. C.....	75
Avant, A. L. R.....	38	Kilpatrick, A. J.....	357
		Knight, J. E.....	225
B		L	
Ballanger, E. G.....	140	Lattimore, Ralston.....	288
Batley, W. W., Jr.....	175- 191	Lockhart, B. W.....	259
Benedict, S. C.....	4		
Block, E. Bates.....	139	M	
Boland, F. K.....	16	McArthur, T. J.....	35
Boyd, M. L.....	155	Moore, N. M.....	71
Branch, J. R. B.....	187	McHatton, H.....	87
Brown, W. W.....	11	Mulherin, W. A.....	88- 205
		Mizell, G. C.....	181
C		Moore, B. S.....	195
Calhoun, F. P.....	319	Mann, T. A.....	345
Campbell, J. L.....	292	McMichael, J. R.....	355
Carswell, T. J.....	184- 223	Minchew, B. H.....	227
Champion, W. L.....	144	Mason, A. B.....	211
Collier, T. J.....	266	Malone, W. H.....	394
Crenshaw, Hansell.....	299		
		N	
D		Niles, Geo. M.....	388
Daly, R. R.....	324		
Dean, F. G.....	179	O	
		Oliveros, B. P.....	73
E		Oertel, T. E.....	95- 322
Elder, O. F.....	140		
Elkin, A. B.....	260	P	
Ellis, J. N.....	379	Palmer, J. W.....	69
Earnest, J. G.....	391		
		R	
F		Rhodes, C. A.....	7- 208
Fitts, W. L.....	3	Ridley, C. L.....	67
Fort, A. G.....	7	Revell, S. T.....	361
Farmer, J. L.....	147	Roy, Dunbar.....	315
Fowler, A. L.....	154- 262		
Fleming, A.....	220	S	
		Stirling, A. W.....	14
G		Swanson, Cosby.....	99- 217
Goldsmith, W. S.....	75- 392	Shallenberger, W. F.....	160
Green, E. M.....	381	Stapler, M. M.....	317
Gaines, L. M.....	385	Slaughter, N. G.....	247
H		T	
Harris, S. T.....	104	Travis, W. D.....	43- 210
Hardman, W. B.....	112	Thrash, E. C.....	114
Hammond, J. H.....	365		
Harris, H. F.....	283- 348	V	
Holliday, J. C.....	248	Visanska, S. A.....	201
J		W	
Jones, E. G.....	76	Woodard, R. C.....	46
Johnston, J. A.....	174	Wills, T. J.....	251
Johnson, M. M.....	221	Wilson, R. C.....	255
Jenkins, R. H.....	214	Whiteside, G. W.....	243

TITLES OF PAPERS

	PAGE
President's Address, W. L. Fitts, M.D.....	3
Powers of the State Board of Health, S. C. Benedict, M.D.....	4
Examination of County School Children, A. G. Fort, M.D.....	7
The Medical Milk Commission and Its Relation to Public Health, C. A. Rhodes, M.D.	7
Possibilities of Laboratory and Bacteriological Work in Medium and Small-Sized Towns, W. W. Brown, M.D.....	11
Some Unusual Cases of Nystagmus, A. W. Stirling, M.D.....	14
The Operative Treatment of Recent Fractures, F. K. Boland, M.D.....	16
The Medical Society and Its Relation to Public Health, Thos. J. McArthur, M.D.....	35
The Eugenical Conservation of Man, A. L. Avant, M.D.....	38
Cerebro-Spinal Meningitis, W. D. Travis, M.D.....	43
A Clinic with Deaf-Mute Children, R. C. Woodard, M.D.....	46
Conservative Treatment of Gun Shot Wounds of the Extremities, Chas. L. Ridley, M.D.	67
Typhoid Vaccine, J. W. Palmer, M.D.....	69
Intestinal Sand, N. M. Moore, M.D.....	71
Flotsam and Jetsam from a Medical Standpoint, B. P. Oliveros, M.D.....	73
Ligation of the Typhoid Vessels in Exophtalmic Goiter, Wm. S. Goldsmith, M.D.....	75
A Consideration of the Subject of Goiter with Especial Reference to Surgical Treat- ment, E. G. Jones, M.D.....	76
Some Remarks on Infant Feeding, H. McHatton, M.D.....	87
The Milk of Pregnant Mothers Not Poisonous to Her Suckling Offspring, W. A. Mul- herin, M.D.....	88
The Status of the Anti-Tubercular Crusade in Georgia, T. E. Oertel, M.D.....	96
The Importance of a Correct Diagnosis of Skin Lesions and Exhibition of Dermatitis Herpetiformis, Cosby Swanson, M.D.....	99
The Treatment of Pulmonary Tuberculosis by Compression of the Lung, S. T. Harris, M.D., Highlands, N. C.....	104
Woman and Her Physician, R. H. Jenkins, M.D.....	214
X-Ray in the Treatment of Skin Lesions, Cosby Swanson, M.D.....	217
The Fly, A. Fleming, M.D.....	220
Eclamsia, M. M. Johnson, M.D.....	221
Three Cases of Intestinal Obstruction, with Operation, T. J. Carswell, M.D.....	223
Treatment of Pellagra with Report of Twelve Cases, J. E. Knight, M.D.....	225
The Relations of the Eye to Diseases of Other Parts of the Body, B. H. Minchew, M.D.	227
Intestinal Obstruction, G. W. Whiteside, M.D.....	243
The Necessity of Healthy Mouths in the Treatment and Prevention of Diseases, N. G. Slaughter, M.D.....	247
Malaria, J. C. Holliday, M.D.....	248
Some Observations of Pellagra, T. J. Wills, M.D.....	251
Ethical Relations Between Physicians and Pharmacists, R. C. Wilson, Ph.G.....	255
The Treatment of Pneumonia, B. W. Lockhart, M.D.....	259
The Value of the X-Ray in the Diagnosis of Foreign Bodies, A. B. Elkin, M.D.....	260
Naked-eye Pathology of the Urine, A. L. Fowler, M.D.....	262
My Observations and Personal Experience on the Improved Technique of Ether Vapor and the Nitrous-Oxide-Oxygen Anaesthetics, T. J. Collier, M.D.....	266
Collecystitis as a Complication of Pellagra, H. F. Harris, M.D.....	283
Clinical Manifestations of Uraemia, Ralston Lattimore, M.D.....	288
Intestinal Obstruction with a Report of Experimental Work, J. L. Campbell, M.D.....	292
So-called Neurasthenia—Some Factors Causative and Curative, Hansell Crenshaw, M.D.	299
The Importance of the Ophthalmoscope in Pregnancy, Dunbar Roy, M.D.....	315
Correttage of the Pharynx in Adults, M. M. Stapler, M.D.....	317

TITLES OF PAPERS—Continued.

	PAGE
The Extirpation of the Lachrymal Sac in Chronic Daeryoehstis, F. P. Calhoun, M.D.	319
Follicular Conjunctivitis—Its Relation to Adenoids, T. E. Oertel, M.D.	322
The Diagnosis and Home Treatment of Tuberculosis, W. B. Hardman, M.D.	112
The Present Status of Specifics in the Treatment of Tuberculosis, E. C. Thrash, M.D.	114
Tuberculin Not Even a Placebo, J. M. Anderson, M.D.	121
The Injurious Effects of Iodides and Bromides on Acute Inflammations, Especially Cystitis, E. Bates Block, M.D.	139
Salvarsan (606) in the Treatment of Syphilis, E. G. Ballenger, M. D.—O. F. Elder, M.D.	140
Additional Report on the Use of Salvarsan, W. L. Champion, M.D.	144
Chronic Ulceration of Trigone and Vesical Neck a Sequel of Specific Urethritis, J. L. Farmer, M.D.	147
Two-Step Method of Enucleation of the Prostate, A. L. Fowler, M.D.	154
Kidney Symptoms and Diagnosis, M. L. Boyd, M.D.	155
The Value of Ureteral Catheterization, W. F. Shallenberger, M.D.	160
Blood Findings in Pellagra, J. A. Johnston, M.D.	174
Report of Case of Urethral Stricture in Hermaphrodite, W. W. Battey, M.D., and T. C. Kershaw, M.D.	175
Tobacco versus Alcohol, J. G. Deau, M.D.	179
Experimental Pellagra, Geo. C. Mizell, M.D.	181
Induction of Labor in Puerperal Eclampsia, T. J. Carswell, Ph.G., M.D.	184
Menstruation, Normal and Abnormal, J. R. B. Branch, M.D.	187
Intestinal Resection in Strangulated Inguinal Hernia. with report of Case, W. W. Battey, Jr., M.D.	191
Radical Surgery in Cases of Cancerum—Oris or "Noma" with report of a Case of Bilateral Infection Complicating Typhoid Fever with Recovery, B. S. Moore, M.D., Atlanta, and John S. Clifford, M.D., Charlotte, N. C.	195
Cau we Prevent the Bottle Fed Baby, S. A. Visanska, M.D., Ph.G.	201
Finkelstein Milk, W. A. Mulherin, M.D.	205
The Prevention of Diseases, W. D. Travis, A.B. M.D.	210
The After Care of Simple Mastoid Wounds, A. B. Mason, M.D.	211
Nose and Throat Reflexes Causing Cough, R. R. Daly, M.D.	324
The Importance of Preserving the Integrity of Contiguous Structures when Operating on Tonsils, C. M. Harris, M.D.	330
Eight Years of Chloroform Anesthesia in Nose and Throat Surgery, Chas. Prevost Grayson, M.D.	332
Sanitation of Schools, T. A. Manu, M.D.	345
The Prevention of Pellagra, H. F. Harris, M.D.	348
Sanitation in the Home, J. R. McMichael, M.D.	355
History of Obstetric Forceps, A. J. Kilpatrick, M.D.	357
Treatment of Typhoid Fever, S. T. Revell	361
The Cotton Mill and Tuberculosis, J. H. Hammond, M.D.	365
Membership in the American Medical Association, Geo. H. Simmons, M.D., L.L.D. Chicago	367
Drainage Sequent to Certain Surgical Procedures, J. N. Ellis, M.D.	379
Psychoses Accompanying Pellagra, E. M. Green, M.D.	381
Case Histories in Neurology, L. M. Gaines, A.B., M.D.	385
Parsimony in Nutrition, Geo. M. Niles, M.D.	388
Twin Pregnancy in a Double Uterus, J. G. Earnest, M.D.	391
Cystoscopy as an Aid in Surgical Diagnosis, W. S. Goldsmith, M.D.	392
Report of a Case of Spleno-Myelogenous Leukaemia with an Unusually High Leucocyte Count, W. H. Malone, M.D.	394

RATES FOR REPRINTS

100.....	\$1.00 per page
200.....	1.25 per page
500.....	1.50 per page
1000.....	2.00 per page

Covers to count as four pages when ordered

The Journal is owned and published by the Association, and all profit goes to make it better. Each member of the Association is financially interested in the Journal to the same extent as every other member, and each member is rightfully anxious for the financial success of the publication.

The greater this financial success, the greater the practical value can be made to the individual member, and hence the greater the value as an advertising medium.

Our advertisers, by their patronage, help to support the Journal, and make its successful publication possible. In return they expect, and rightfully, a fair return for their money. Every dollar spent by a member of the Medical Association of Georgia with advertisers in our Journal, in preference to non-advertisers, is a dollar spent in advancing his own personal advantage, for he has contributed something indirectly to the betterment of his own property.

The Journal cannot exist without the advertisers and their good will.

The advertisers cannot continue in business without the patronage of the medical profession.

The medical man cannot continue in business without the supplies for sale by the advertisers.

The interests of all are identical—the profession must depend upon the manufacturers, etc. The manufacturers, drug houses, etc., must depend upon the more progressive and more successful physicians. The interests of both are best served through the official Medical Journal—the Journal published by the profession in its own best interests, scientifically and ethically.

ADVERTISING RATES

1	Page 1 year.....	\$150.00
$\frac{1}{2}$	" 1 "	87.50
$\frac{1}{4}$	" 1 "	50.00
$\frac{1}{8}$	" 1 "	33.00
$\frac{1}{16}$	" 1 "	25.00
1	" 6 months.....	87.50
$\frac{1}{2}$	" 6 "	50.00
$\frac{1}{4}$	" 6 "	33.00
$\frac{1}{8}$	" 6 "	25.00
$\frac{1}{16}$	" 6 "	20.00
1	" 3 "	50.00
$\frac{1}{2}$	" 3 "	33.00
$\frac{1}{4}$	" 3 "	15.00
$\frac{1}{8}$	" 3 "	10.00
1	" 1 month.....	25.00
$\frac{1}{2}$	" 1 "	15.00
$\frac{1}{4}$	" 1 "	10.00
$\frac{1}{8}$	" 1 "	7.50

These rates do not apply to cover pages, space next to reading matter, or matter requiring to be reset.

Hypodermatic-tablet efficiency

depends upon two things.

HYPODERMATIC TABLETS cannot be judged by outward signs. A dozen tablets from a dozen sources may look exactly alike. But mere appearance counts for little. **CONTENT** and **SOLUBILITY**—these are the things of paramount importance.

♦ ♦ ♦

The practitioner who uses Parke, Davis & Co.'s hypodermatic tablets may do so with full assurance of their reliability.

Our hypodermatic tablets are composed of rigidly tested materials. They are of uniform strength, of guaranteed potency. In every tablet the active component is present in the precise amount stated on the label.

♦ ♦ ♦

As to solubility, remember that merely to fly into pieces when thrown into water is not the requirement. Many tablets do that, fine undissolved particles settling to the bottom. In such a case the supernatant liquid which you draw into your syringe is not the solution you believe it to be, nor can it be expected to yield the desired results.

Our hypodermatic tablets dissolve quickly and completely: they do not merely disintegrate. In a very few seconds you have, ready to inject, a perfect solution of which every minim is a minim of activity. There is no delay, no uncertainty.

♦ ♦ ♦

Use our hypodermatic tablets. Get results—get them promptly.

SUPPLIED IN TUBES OF 25.

Home Offices and Laboratories,
Detroit, Michigan.

PARKE, DAVIS & CO.

NEW YORK ACADEMY OF MEDICINE



3 0681 0219543 1

